

Agenda

Public Works and Transportation Committee

Anderson Room, City Hall 6911 No. 3 Road Wednesday, October 19, 2016 4:00 p.m.

Pg. # ITEM

MINUTES

PWT-5 Motion to adopt the minutes of the meeting of the Public Works and Transportation Committee held on September 21, 2016.

NEXT COMMITTEE MEETING DATE

November 23, 2016, (tentative date) at 4:00 p.m. in the Anderson Room.

ENGINEERING AND PUBLIC WORKS DIVISION

1. LETTER OF SUPPORT FOR TRACKING VEHICLE KILOMETRES TRAVELLED DATA (Eila Part No. 10.6125.07.02) (REDMS No. 5178451 y. 7)

(File Ref. No. 10-6125-07-02) (REDMS No. 5178451 v. 7)

PWT-9

See Page **PWT-9** for full report

Designated Speaker: Nicholas Heap

STAFF RECOMMENDATION

That a letter be sent to the BC Minister of Transportation and Infrastructure indicating the City's support for the collection of annual vehicle kilometres travelled data by the Insurance Corporation of British Columbia as identified in the report titled "Letter of Support for Tracking Vehicle Kilometres Travelled Data" from the Director, Engineering, dated September 26, 2016.

2. 2017 PAVING PROGRAM

(File Ref. No. 10-6000-01) (REDMS No. 5175476)

PWT-14

See Page **PWT-14** for full report

Designated Speaker: John Irving

STAFF RECOMMENDATION

That the staff report titled, "2017 Paving Program," dated September 22, 2016, from the Director, Engineering be received for information.

3. OVAL VILLAGE DISTRICT ENERGY UTILITY BYLAW NO. 9134, AMENDMENT BYLAW NO. 9622

(File Ref. No. 10-6125-01) (REDMS No. 5166661 v. 4)

PWT-21

See Page **PWT-21** for full report

Designated Speaker: Alen Postolka

STAFF RECOMMENDATION

That the Oval Village District Energy Utility Bylaw No. 9134, Amendment Bylaw No. 9622 be introduced and given first, second and third readings.

4. ALEXANDRA DISTRICT ENERGY UTILITY BYLAW NO. 8641, AMENDMENT BYLAW NO. 9617

(File Ref. No. 10-6600-10-02) (REDMS No. 5167819 v. 7)

PWT-30

See Page PWT-30 for full report

Designated Speaker: Alen Postolka

STAFF RECOMMENDATION

That the Alexandra District Energy Utility Bylaw No. 8641, Amendment Bylaw No. 9617 be introduced and given first, second and third readings.

5. 2016 SUBMISSION TO THE NATIONAL DISASTER MITIGATION PROGRAM: STEVESTON ISLAND FLOOD MITIGATION PLANNING PROJECT AND THE FLOOD MITIGATION STRATEGY UPDATE

(File Ref. No. 10-6060-01) (REDMS No. 5183569)

PWT-40

See Page **PWT-40** for full report

Designated Speakers: Lloyd Bie and Denise Tambellini

STAFF RECOMMENDATION

- (1) That the submission to the National Disaster Mitigation Program requesting funding for up to 100 % of the \$2,120,000 cost for Steveston Island Flood Mitigation Planning Project and the Flood Mitigation Strategy Update be endorsed;
- (2) That the Chief Administrative Officer and the General Manager of Engineering and Public Works be authorized to enter into funding agreements with the Government of Canada and/or the Province of BC for the above mentioned projects should they be approved for funding by the Government of Canada; and
- (3) That, should the above mentioned projects be approved for funding by the Government of Canada, the 2017 Capital Plan and the 5-Year Financial Plan (2017-2021) be updated accordingly.

PLANNING AND DEVELOPMENT DIVISION

6. **PROPOSED AMENDMENTS TO TRAFFIC BYLAW NO. 5870** (File Ref. No. 10-6450-00; 12-6450-01;) (REDMS No. 4977064 v. 5; 4986963 v. 10)

PWT-71

See Page PWT-71 for full report

Designated Speaker: Victor Wei

STAFF RECOMMENDATION

- (1) That Traffic Bylaw No. 5870, Amendment Bylaw No. 9539 be introduced and given first, second and third reading;
- (2) That Municipal Ticket Information Authorization Bylaw No.7321, Amendment Bylaw No. 9550 be introduced and given first, second and third reading; and
- (3) That Notice of Bylaw Violation Dispute Adjudication Bylaw No.8122, Amendment Bylaw No.9554 be introduced and given first, second and third reading.

7. MANAGER'S REPORT

ADJOURNMENT



Minutes

Public Works and Transportation Committee

- Date: Wednesday, September 21, 2016
- Place: Anderson Room Richmond City Hall
- Present: Councillor Chak Au, Chair Councillor Harold Steves Councillor Derek Dang Councillor Alexa Loo
- Absent:Councillor Ken JohnstonAlso Present:Councillor Carol Day
- Call to Order: The Chair called the meeting to order at 4:00 p.m.

MINUTES

It was moved and seconded That the minutes of the meeting of the Public Works and Transportation Committee held on July 20, 2016, be adopted as circulated.

CARRIED

ENGINEERING AND PUBLIC WORKS DIVISION

1. **CITY OF RICHMOND ENERGY STATEMENT INITIATIVE** (File Ref. No. 10-6125-05-01) (REDMS No. 5149960 v. 7)

It was moved and seconded

That the staff report titled "City of Richmond Energy Statement Initiative" from the Director, Engineering, dated August 29, 2016, be received for information.

CARRIED

2. RELEASE OF BC CLIMATE LEADERSHIP PLAN

(File Ref. No. 10-6125-07-02) (REDMS No. 5146965 v. 5)

The Committee expressed satisfaction with the level of detail presented in the report. In response to questions, Nicholas Heap, Sustainability Project Manager, confirmed that the Provincial and Federal governments are engaged in the development of a Pan-Canadian climate plan.

It was moved and seconded

That a letter be sent to the Premier of BC to express the concerns regarding the Climate Leadership Plan, as identified in the report titled "Release of BC Climate Leadership Plan," dated August 24, 2016, from the Director, Engineering.

CARRIED

The Committee, after gathering input from staff, suggested that it would be beneficial to simplify the report and include the summary in a press release which could be made available to the public.

PLANNING AND DEVELOPMENT DIVISION

3. TRANSLINK 2017 CAPITAL PROGRAM COST-SHARE SUBMISSIONS

(File Ref. No. 01-0154-04) (REDMS No. 5106703 v. 3)

In reply to a query, Victor Wei, Director, Transportation, noted that the results of the cost share program could be complied as early as end of the year or toward the beginning of the next year.

It was moved and seconded

- (1) That the submission of pedestrian, bicycle and transit facility improvement projects for cost-sharing as part of the TransLink 2017 Bicycle Infrastructure Capital Cost Sharing Regional Needs Program and Transit-Related Road Infrastructure Program, as described in the report, titled, "TransLink 2017 Capital Program Cost-Sharing Submissions" dated August 10, 2016 from the Director, Transportation, be endorsed; and
- (2) That, should the above submissions be successful and the projects receive Council's approval via the annual capital budget process, the Chief Administrative Officer and General Manager, Planning and Development be authorized to execute the funding agreements and the 2017 Capital Plan and the 5-Year Financial Plan (2017-2021) be updated accordingly.

CARRIED

4. TRANSLINK SOUTHWEST AREA TRANSPORT PLAN – RESULTS OF PHASE 1 CONSULTATION

(File Ref. No. 01-0154-04) (REDMS No. 5146696 v. 2)

It was moved and seconded

That the staff report titled "TransLink Southwest Area Transport Plan – Results of Phase 1 Consultation" providing a summary of the Phase 1 consultation results for TransLink's Southwest Area Transport Plan, dated August 24, 2016, from the Director, Transportation, be received for information.

CARRIED

5. RECOMMENDATION TO AWARD CONTRACT 5658P - TRAFFIC SIGNAL SYSTEM MAINTENANCE, UPGRADING AND INSTALLATION

(File Ref. No. 02-0775-50-5658) (REDMS No. 5104871)

In response to questions, Victor Wei, Director, Transportation, noted that Cobra Electric Limited has been providing service to the City of Richmond for more than 20 years.

It was moved and seconded

- (1) That Contract 5658P "Traffic Signal System Maintenance, Upgrading and Installation" be awarded to Cobra Electric Limited in an amount not to exceed approved budgets and that staff be authorized to extend the contract in one-year increments up to five years in total and, if required, extend the contract beyond the fiveyear term on a month-by-month basis until such time a new contract can be advertised and awarded; and
- (2) That the Chief Administrative Officer and General Manager, Planning and Development, be authorized to execute the above contract.

CARRIED

6. DRAINAGE BOX CULVERT REPLACEMENT AT NO. 2 ROAD AND WALTON ROAD

(File Ref. No.: 10-6060-01) (REDMS No. 5157881)

It was moved and seconded

(1) That funding of \$2,000,000 from the Drainage Utility Reserve be included as an amendment to the 5 Year Financial Plan (2016-2020) to complete the Drainage Box Culvert Replacement Project at No. 2 Road and Walton Road; and

(2) That the Chief Administrative Officer and General Manager, Engineering and Public Works, be authorized to award the Drainage Box Culvert Replacement Project at No. 2 Road and Walton Road and execute an agreement with respect thereto.

CARRIED

7. WATER METER PROGRAM UPDATE

(File Ref. No.: 10-6650-02) (REDMS No. 5125648 v. 11)

In reply to questions, Lloyd Bie, Manager, Engineering Planning, explained that the Fixed Based Network offers many benefits, including: (i) providing real time consumption information, (ii) eliminating the need for workers to drive by water meters to gather information via radios, (iii) being able to witness and prevent leakages, and (iv) mitigating the wastage of water caused by leaks.

It was moved and seconded That staff bring forward options and recommendations for mandatory Multi-Family water metering for consideration through the Capital budget process.

CARRIED

8. MANAGER'S REPORT

None.

ADJOURNMENT

It was moved and seconded *That the meeting adjourn (4:17 p.m.).*

CARRIED

Certified a true and correct copy of the Minutes of the meeting of the Public Works and Transportation Committee of the Council of the City of Richmond held on Wednesday, September 21, 2016.

Councillor Chak Au Chair Shaun Divecha Legislative Services Coordinator



Re:	Letter of Support for Tracking Vehicle Kilometres Travelled Data		
From:	John Irving, P.Eng. MPA Director, Engineering	File:	10-6125-07-02/2016- Vol 01
То:	Public Works and Transportation Committee	Date:	September 26, 2016

Staff Recommendation

That a letter be sent to the BC Minister of Transportation and Infrastructure indicating the City's support for the collection of annual vehicle kilometres travelled data by the Insurance Corporation of British Columbia as identified in the report titled "Letter of Support for Tracking Vehicle Kilometres Travelled Data" from the Director, Engineering, dated September 26, 2016.

John Irving, P.Eng. MPA Director, Engineering (604-276-4140)

REPORT CONCURRENCE					
ROUTED TO:	CONCURRENCE	CONCURRENCE OF GENERAL MANAGER			
Transportation					
REVIEWED BY STAFF REPORT / AGENDA REVIEW SUBCOMMITTEE	INITIALS: $\mathcal{D}\mathcal{W}$	APPROVED BY CAO			

Staff Report

Origin

This report describes a new initiative by provincial government staff to obtain more accurate information on the actual kilometers travelled by all vehicles registered within British Columbia. This data on aggregated vehicle kilometres travelled (VKT) will be used to improve transportation, land-use and sustainability planning within the City of Richmond.

This report supports Council's 2014-2018 Term Goal #3 A Well-Planned Community:

Adhere to effective planning and growth management practices to maintain and enhance the livability, sustainability and desirability of our City and its neighbourhoods, and to ensure the results match the intentions of our policies and bylaws.

3.1. Growth and development that reflects the OCP, and related policies and bylaws.

3.3. Effective transportation and mobility networks.

This report supports Council's 2014-2018 Term Goal #4 Leadership in Sustainability:

Continue advancement of the City's sustainability framework and initiatives to improve the short and long term livability of our City, and that maintain Richmond's position as a leader in sustainable programs, practices and innovations.

4.1. Continued implementation of the sustainability framework.

This report supports Council's 2014-2018 Term Goal #5 Partnerships and Collaboration:

Continue development and utilization of collaborative approaches and partnerships with intergovernmental and other agencies to help meet the needs of the Richmond community.

5.2. Strengthened strategic partnerships that help advance City priorities.

Background

In 2010, Council adopted targets in Richmond's Official Community Plan (OCP) to reduce community greenhouse gas (GHG) emissions 33% below 2007 levels by 2020, and 80% below 2007 levels by 2050. The OCP also includes a target to reduce energy use 10% by 2020 below 2007 levels. Council approved the Community Energy and Emission Plan (CEEP) in January 2014 which sets out an array of strategies and actions for the City to take to reduce community energy use and GHG emissions. The City has implemented many initiatives including the award-winning Alexandra and Oval Village district energy utilities, better-than-code energy efficiency requirements for new construction, the "EnergySave Richmond" suite of programs for existing buildings, pedestrian environment improvements and increased solid waste diversion.

Staff reported out in September 2016 that the City's overall GHG emissions in 2012 (the last year for which complete data is available) were 6.1% below 2007 emissions totals, after factoring in a needed adjustment to the province's transportation emissions estimate.

Analysis

The City depends on accurate data in order to identify effective and economic policy, program and infrastructure investment options. Staff make use of many data sources including census information, population forecasts, traffic counts and aggregated electricity and natural gas consumption data. However, there are a number of areas in which policy analysis and decisionmaking are significantly hampered by a lack of available information.

One of the most significant data gaps for City staff is accurate information on the overall use of private automobiles and commercial vehicle fleets situated in Richmond. While data on the total number of vehicles is available, there is no accurate data on how much these vehicles have been driven (and what tonnage of emissions they have emitted) in a given year. In recent years, estimates of total VKT have been obtained by multiplying the total counts for various classes and ages of vehicle by region-wide average VKT figures derived from vehicles taking the AirCare test. Unfortunately, this approach is not sensitive to community-specific shifts by residents with regard to using cars, taking transit or using active transport modes like walking and cycling.

The limitations of VKT data to date are illustrated with the opening of the Canada Line in Richmond in 2009. TransLink's Richmond-Vancouver ridership numbers tripled between 2008 and 2010, and a "trip diary" survey (conducted once every three years) suggested both a large increase in transit use and an absolute decline in vehicle trips between Richmond and Vancouver between 2008 and 2011. However, the methodology used by the Province to calculate VKT for Richmond applied regionally-derived factors which indicated increased total VKT. The result suggests, incorrectly, that the \$1.4 billion Canada Line investment and the use of compact development within the Central Area of the city have had no effect on local transportation choices.

With the end of the AirCare program on December 31, 2014, the situation has worsened, since even regionally-averaged VKT figures cannot be produced for the year 2015 or after. If this issue is not addressed, it shall greatly impede the ability of local governments to adequately assess transportation and GHG emissions trends.

Annually-updated VKT data would be of great value to a range of City activities. As noted above, this data would provide accurate information for the first time on the sector responsible for an estimated 59% of the city's total GHG emissions. Land use planning staff note that VKT data on a neighbourhood basis would enable the City to see how driving habits are affected by land use change (e.g. neighbourhood densification and/or introduction of new housing types), by transportation improvements, and by other factors. In addition, transportation planning staff note that VKT information is a prerequisite for a region-wide mobility pricing initiative, as advocated by the Metro Vancouver Mayors' Council on Regional Transportation.

In response, Provincial staff now propose that the Ministry of Transportation and Infrastructure direct the Insurance Corporation of British Columbia (ICBC) to collect odometer data when

annually renewing vehicle insurance coverage; an approach previously endorsed by UBCM members in 2010¹. Provided on a suitably disaggregated basis to local governments in order to prevent any disclosure of information about specific vehicle owners, this data would provide local governments with accurate locally-based data for the first time. The data would allow staff to discern the effect of locally-based new transportation infrastructure, land-use changes or emission reduction initiatives on a year-to-year basis, providing the City with the essential feedback required to further optimize policies, programs and infrastructure investments.

In responding to the 2010 UBCM resolution, Provincial Government staff at Ministry of Public Safety and Solicitor General raised four concerns about ICBC collecting VKT data:

1. Customer perceptions regarding invasion of privacy

This concern can be addressed by ensuring that data provided to local governments is suitably aggregated so as to prevent any disclosure of information about specific vehicle owners, as is already done with census information. Aggregated VKT data by area would provide local governments with accurate locally-based data for the first time, allowing staff to discern the local effects of new public transportation services, walkability or cycling infrastructure, land-use changes, planning policies for "complete communities" as well as emission reduction initiatives on a year-to-year basis, providing the city with the essential feedback required to further optimize policies, programs and infrastructure investments.

- 2. Present cost of the technology;
- 3. Administrative challenges to record and track mileage for over three million customers individually;

These two concerns appear to assume that ICBC staff or technology would be required to obtain odometer readings. This could be resolved simply by recommending that drivers self-report the VKT data, (emphasizing that this information has no impact on drivers' insurance rates).

4. Difficulty of verifying odometer data / potential risk of fraud.²

Given that the odometer data would not affect any costs levied on the vehicle owner, the risk of fraud appears to be minimal. Staff note that trusted data sources like the Canada Census also rely on self-reported information. Moreover, as recent discussions over the Canada Census have made clear, having recent, locally-specific data with a given percentage of error is greatly preferable to having no information at all.

Financial Impact

Provincial staff note that the implementation of VKT data collection by ICBC will likely entail implementation and ongoing costs.³ Any additional costs would need to be borne by ICBC, the Province, data recipients (including local governments) or a combination of these

¹ 2010 UBCM Resolution B83: ICBC Aggregate Data

² http://www.ubcm.ca/assets/Resolutions~and~Policy/Resolutions/2010%20Provincial%20Responses.pdf

³ For purposes of comparison, a 1% overestimate in the City's transportation sector emissions estimate is equivalent to \$140,000 per year in additional offset costs.

sources. Provincial staff note that they will have a clearer understanding of the costs involved once the formal submission has been made to ICBC. Were any reasonable fee assessed to the City, staff believe the benefits obtained from annual VKT data with regard to transportation, land use and GHG emission reduction efforts would be of significant net value to the City.

Conclusion

Having aggregated data on total annual vehicle kilometers travelled by all vehicles within a given area would inform and improve the City's analysis and decision-making on a wide range of city policy, planning and infrastructure investment decisions. Staff recommend that the application by the Climate Action Secretariat to the Ministry of Transportation and Investment, requesting that ICBC be directed to collect odometer readings annually from drivers renewing their vehicle insurance, be supported by advising the Minister of Transportation and Infrastructure in writing.

Nicholas Heap Sustainability Project Manager (604-276-4267)

NH:nh

Peter Russell

Sr. Manager, Sustainability & District Energy (604-276-4130)



Report to Committee

То:	Public Works and Transportation Committee	Date:	September 22, 2016
From:	John Irving, P.Eng. MPA Director, Engineering	File:	10-6000-01/2016-Vol 01
Re:	2017 Paving Program		

Staff Recommendation

That the staff report titled, "2017 Paving Program," dated September 22, 2016, from the Director, Engineering be received for information.

John Irving, P.Eng, MPA Director, Engineering (604-276-4140)

Att. 3

REPORT CONCURRENCE					
ROUTED TO:	CONCURRENCE	CONCURRENCE OF GENERAL MANAGER			
Roads & Construction	Ø				
REVIEWED BY STAFF REPORT / AGENDA REVIEW SUBCOMMITTEE	Initials: $\mathbb{D}\mathcal{W}$	APPROVED BY CAO			

Staff Report

Origin

This report supports Council's 2014-2018 Term Goal #6 Quality Infrastructure Networks:

Continue diligence towards the development of infrastructure networks that are safe, sustainable, and address the challenges associated with aging systems, population growth, and environmental impact.

As in previous years, staff are presenting the annual paving program report for information purposes. Staff propose to tender this program early to realize favourable asphalt pricing.

Background

The paving program is required to maintain the City's road network to current operating levels as well as reduce the need for costly repairs. Staff have developed a prioritized list of locations which are included in the 2017 Paving Program.

Analysis

The scope of work includes the milling and paving of roads in priority order as identified by the City's Pavement Management System and staff. The Pavement Management System software takes into account items such as the age, structure, and current condition of the road. Pavement deflection data was gathered for select roads (arterial roads, the TransLink Major Road Network, recently resurfaced segments, and sections with substantial surface cracking) and is being used in the current Pavement Management System model.

The Aging Infrastructure Planning Report has identified a need for additional funding to maintain the City's roads to the current level of service. The impact of this funding gap has been partially mitigated by low paving contract prices over the past few years. This pricing is a result of early tendering of the annual paving contract and low material costs.

Included in Attachment 1 is a list of the primary paving sites included in the 2017 Paving Program. As with past years, it is possible that identified paving locations cannot be completed due to conflict with development projects that are not known at this time. Should the seasonal paving restrictions permit, any deferred primary paving locations would be replaced with the secondary paving locations. These secondary locations are listed in Attachment 2. Two maps of the proposed paving sites (Richmond West and Richmond East) are included in Attachment 3.

The tender for this year's Paving Program is scheduled to be issued to the market in November 2016. The 2017 Paving Program also includes an amendment to the City's standard tendering practices that reflects upon the City's environmental initiatives and allows for the use of recycled asphalt. The successful bidder will be encouraged to employ sustainable methodologies, practices and materials that would assist in reducing harmful emissions, in direct alignment with the City's sustainability goals.

The tender also notes that contract award is subject to approval of the 2017 Capital Budget by Council.

Proposed funding for the 2017 Paving Program has been submitted as part of the 2017 Capital Budget as follows:

Proposed Funding	Amount (\$)
2017 Annual Asphalt Re-Paving Program – MRN	\$ 1,081,000
2017 Annual Asphalt Re-Paving Program – Non-MRN	\$ 3,200,000
Total Proposed Funding	\$ 4,281,000

Award of the 2017 Paving Program will occur once the 2017 Capital Budget is approved by Council.

Conclusion

The procurement process for the 2017 Paving Program is underway. Contract award and commencement of paving will occur once the 2017 Capital Budget is approved by Council.

Milton Chan, P. Eng. Manager, Engineering Design & Construction (604-276-4377)

AK

Wasim Memon, C.E.T. Supervisor – Inspections (604-247-4189)

MC:mc

- Att. 1: 2017 Paving Program Primary Locations
 - 2: 2017 Paving Program Secondary Locations
 - 3: 2017 Paving Program Proposed Locations Richmond West and Richmond East

Attachment 1

2017 PAVING PROGRAM – PRIMARY LOCATIONS

LOCATION	FAULTS
Minoru Boulevard (7000 Block)	- Utility Cuts, Pavement Cracking
No. 3 Road (7000 Block)	- Utility Cuts, Pavement Cracking
No. 4 Road (7000 Block)	- Utility Cuts, Pavement Cracking
No. 4 Road (10000 Block)	- Utility Cuts, Pavement Cracking
No. 5 Road (7000 Block)	- Utility Cuts, Pavement Cracking
No. 5 Road (11000 and 12000 Block)	- Utility Cuts, Pavement Cracking
Blundell Road (3000 Block)	- Utility Cuts, Pavement Cracking
Blundell Road (9000 Block)	- Utility Cuts, Pavement Cracking
Blundell Road (11000 Block)	- Utility Cuts, Pavement Cracking
Cambie Road (9000 Block)	- Utility Cuts, Pavement Cracking
Lansdowne Road (8000 Block)	- Utility Cuts, Pavement Cracking
Cook Road (No.3 Road to Buswell Street)	- Utility Cuts, Pavement Cracking
Granville Avenue (6000 Block)	- Utility Cuts, Pavement Cracking
Burrows Road (14000 Block)	- Utility Cuts, Pavement Cracking
Cooney Road (6000 Block)	- Utility Cuts, Pavement Cracking
No. 5 Road and Bridgeport Road Intersection	- MRN Treatment
Steveston Highway (6000 Block)	- MRN Treatment
Steveston Highway (9000 Block)	- MRN Treatment
Westminster Highway (21000 Block)	- MRN Treatment
Gilbert Road (River Road to Elmbridge Way)	- MRN Treatment
Leonard Road (10000 Block)	- Utility Cuts, Pavement Cracking
Bathgate Way (12000 Block)	- Utility Cuts, Pavement Cracking
McLennan Avenue	- Utility Cuts, Pavement Cracking
Gilmore Crescent	- Utility Cuts, Pavement Cracking
Finlayson Drive	- Utility Cuts, Pavement Cracking
Dennis Laneway (Maddocks Laneway to Wilkinson Road)	- Utility Cuts, Pavement Cracking
Cambie Road (14000 Block)	- Utility Cuts, Pavement Cracking

Attachment 2

2017 PAVING PROGRAM – SECONDARY LOCATIONS

LOCATION	FAULTS
No. 2 Road (6000 Block)	- MRN Treatment
Berry Road (Mortfield Road to Southdale Road)	- Utility Cuts, Pavement Cracking
Blundell Road (Highway 99 Overpass to SidawayRoad)	- Utility Cuts, Pavement Cracking
Bridgeport Road (McLennan Avenue to Shell Road)	- Utility Cuts, Pavement Cracking
Browngate Road (No. 3 Road to Hazelbridge Way)	- Utility Cuts, Pavement Cracking
Cook Road (Buswell Street to Cooney Road)	- Utility Cuts, Pavement Cracking
Coppersmith Way (Horseshoe Way to HammersmithWay)	- Utility Cuts, Pavement Cracking
Garden City Road (Francis Road to Glenallan Gate)	- Utility Cuts, Pavement Cracking
Hammersmith Way (Horseshoe Way to CoppersmithWay)	- Utility Cuts, Pavement Cracking
Hammersmith Gate (Shell Road to HammersmithWay)	- Utility Cuts, Pavement Cracking
Lansdowne Road (Gilbert Road to Alderbridge Way)	- Utility Cuts, Pavement Cracking
No. 3 Road (Cook Road to Granville Avenue)	- Utility Cuts, Pavement Cracking
No. 3 Road (Cambie Road to Browngate Road)	- Utility Cuts, Pavement Cracking
No. 3 Road (Bridgeport Road to Beckwith Road)	- Utility Cuts, Pavement Cracking
No. 4 Road (Kilby Drive to Highway 99)	- Utility Cuts, Pavement Cracking
No. 4 Road at Bridgeport Road	- Utility Cuts, Pavement Cracking
No. 5 Road at Westminster Hwy	- Utility Cuts, Pavement Cracking
No. 6 Road at 800 metres north of Blundell Road	- Utility Cuts, Pavement Cracking
Railway Avenue (Westwater Drive to Britannia Drive)	- Utility Cuts, Pavement Cracking
Railway Avenue (Brunswick Drive to Garry Street)	- Utility Cuts, Pavement Cracking
No.1Road (9000 Block)	- Utility Cuts, Pavement Cracking
No.4 Road (9000 Block)	- Utility Cuts, Pavement Cracking
No.6 Road (8000 Block)	- Utility Cuts, Pavement Cracking
Westminster Highway North (Fraserwood Place to Muir Drive)	- Utility Cuts, Pavement Cracking
Williams Road (west leg of Springmont Drive to dyke)	- Utility Cuts, Pavement Cracking
Railway Avenue (11000 Block)	- Utility Cuts, Pavement Cracking
Shell Road (Maddocks Road to Williams Road)	- Utility Cuts, Pavement Cracking
Shell Road (10000 Block)	- Utility Cuts, Pavement Cracking



PWT - 19

Attachment 3



PWT - 20



То:	Public Works and Transportation Committee	Date:	September 26, 2016
From:	John Irving, P.Eng. MPA Director, Engineering	File:	10-6125-01/2016-Vol 01
Re:	Oval Village District Energy Utility Bylaw No. 913 9622	4, Amen	idment Bylaw No.

Staff Recommendation

That the Oval Village District Energy Utility Bylaw No. 9134, Amendment Bylaw No. 9622 be introduced and given first, second and third readings.

John Irving, P.Eng. MPA Director, Engineering (604-276-4140)

REPORT CONCURRENCE					
ROUTED TO:	CONCURRENCE	CONCURRENCE OF GENERAL MANAGER			
Finance Department Law	凶				
REVIEWED BY STAFF REPORT / AGENDA REVIEW SUBCOMMITTEE	INITIALS:	APPROVED BY CAO			

Staff Report

Origin

In 2014, Council adopted the Oval Village District Energy Utility Bylaw No. 9134 (Bylaw) establishing governing regulations and the rate for the delivery of energy for space and domestic hot water heating within the Oval Village District Energy Utility (OVDEU) service area.

The purpose of this report is to recommend 2017 OVDEU service rates.

This report supports Council's 2014-2018 Term Goal #4 Leadership in Sustainability:

Continue advancement of the City's sustainability framework and initiatives to improve the short and long term livability of our City, and that maintain Richmond's position as a leader in sustainable programs, practices and innovations.

4.1. Continued implementation of the sustainability framework.

4.2. Innovative projects and initiatives to advance sustainability.

Background

In 2013, under Council direction, the Lulu Island Energy Company (LIEC) was established as a wholly-owned corporation of the City for the purposes of managing district energy utilities on the City's behalf. The District Energy Utilities Agreement between the City and LIEC was executed in 2014, assigning LIEC the function of providing district energy services on behalf of the City.

The OVDEU service area and the associated operations, assets and liabilities are administered by LIEC. All capital and operating costs are recovered through revenues from user fees, ensuring that the business is cost neutral over time for the City of Richmond's residents. In 2014, in order to accomplish these goals, LIEC and Corix Utilities entered into a design-build-finance-operate-maintain concession agreement. The City is the sole shareholder of LIEC and Council sets the rates to customers.

Currently, there are four buildings (Carrera, Riva 1, Riva 2 and River Park Place-Phase 1) connected to the OVDEU and two more (Cadence and Tempo) will be added in the next three months (see Attachment 2). At the end of 2016, over 1300 residential units will be receiving energy from the OVDEU. Energy is currently supplied from the two interim energy centres with natural gas boilers which combined provide 11 MW of heating capacity. When enough buildings are connected to the system to justify the cost, a permanent energy centre will be built which will produce low carbon energy, currently planned to be harnessed from the Gilbert Trunk sanitary force main sewer. Over the project's lifetime, the OVDEU system is anticipated to reduce the GHG emissions by more than 52,000 tonnes of CO2 as compared to business as usual.

Analysis

Proposed 2017 OVDEU Rates

The 2016 OVDEU rate is comprised of:

- 1. A Capacity Charge (Fixed) monthly charge of \$0.0476 per square foot of the building gross floor area; and
- 2. A Volumetric Charge (Variable) charge of \$29.328 per megawatt hour of energy returned from the Heat Exchanger and Meter Set at the Designated Property.

Factors that were considered when developing the 2017 OVDEU rate options are:

- **Competitive Rate:** The rate should provide end users with annual energy costs that are competitive with conventional system energy costs, based on the same level of service.
- **Cost Recovery:** The OVDEU was established on the basis that all capital and operating costs would ultimately be recovered through revenues from user fees. The financial model included recovery of the capital investment over time and built in a rate increase year over year for fuel cost increases, inflation, etc. in order to ensure the financial viability of the system.
- Financial Obligations from LIEC to Corix: The OVDEU business was established based on the concept that all capital and operating costs would be recovered through revenues from user fees, ensuring that the business would be cost neutral over time. In order to fulfill these requirements, LIEC executed a concession agreement with Corix Utilities to design, construct, finance, operate and maintain the OVDEU. Under this agreement, Corix is entitled to recover from LIEC any costs and expenses that are incurred in accordance with prudent utility practice.
- Forecasted Utility Costs: Utility cost (electricity and natural gas) increases are outside the City's control. Nonetheless, these commodity costs directly impact the operation cost of the OVDEU. BC Hydro's 10 year plan projects an electricity rate increase of 3.5% in 2017. On September 12, 2016, Fortis BC announced that the BC Utilities Commission approved increase of natural gas rates; beginning October 1, 2016 natural gas rates will increase by approximately 11.9 % for a typical residential customer in Lower Mainland.
- **Consumer and Municipal Price Indexes:** Other factors to consider include various price indexes. For example, the consumer price index (CPI) is estimated by the Finance Department at 2.1% based on the The Conference Board of Canada Metropolitan Outlook 1 Spring 2016, while municipal price index (MPI) is estimated at 2.7%.

Taking into consideration the above factors, three options are presented here for consideration:

Option 1 – No increase to the OVDEU rate for services (Not recommended)

Under the "status quo" option, the rate would not change from the 2016 rate.

The OVDEU is in its early days of operation, and as a result the utility (electricity and natural gas), operation and maintenance costs are still largely based on projections of the original financial model. Variation from the model will affect the long term performance of the OVDEU. For example, the revenue may vary from the projected revenue in the financial model depending on the speed of development and occupancy. The financial model of the OVDEU has taken into consideration modest rate increases similar to projected increase rates for conventional energy. A status quo approach would have a negative impact on the financial performance of the OVDEU and could affect LIEC's business model.

Option 2 - 2% *increase to OVDEU rate for services (Not recommended)*

A 2% increase would only partially recover the estimated utility (electricity and natural gas), operation and maintenance cost increases. At this stage, the OVDEU relies on natural gas to provide energy services to customers and therefore natural gas cost takes a portion of OVDEU expenses.

Besides utility, operation and maintenance costs, the OVDEU rate also recovers capital and capital related costs. This rate increase is below the projected increase used in the OVDEU financial model. Hence, an increase of only 2% would have a negative impact on the financial performance of the OVDEU and could affect LIEC's business model.

Option 3 - 4% *increase to OVDEU rate for services (Recommended)*

The proposed 4% rate increase under this option follows the OVDEU financial model and is below the estimated business as usual (BAU) rate increase (around 7%¹) that the customers would pay for the energy from the conventional utility system.

Corix Utilities, LIEC's partner for the OVDEU project, confirmed that the natural gas cost increase is manageable with the above recommended rate adjustment. This is due to the fact that the fuel costs portion (natural gas and electricity) in the breakdown of the cost of service that LIEC is being charged by Corix based on Concession Agreement is relatively small comparing to the related capital recovery and the other operating costs.

The OVDEU financial model and LIEC business model follows the principle of full cost recovery. To mitigate potential financial risks, it is recommended that the City follow the financial model as much as possible in the early years of the utility operation and annually adjust the rates as per the model. As the utility collects more actual data about the connected buildings'

¹ Blended increase based on 3.5% increase of electricity cost and 11.9% increase of natural gas cost. The BAU scenario assumes that 40% of the building heating load would be provided from electricity and the remaining 60% would be from gas make-up air units. Non-fuel BAU costs are assumed to be 25% of total costs and that they increase by CPI.

updated and the annual rate adjustment may follow closer year to year financial indicators, to ensure that the business is sustainable, economically viable and beneficial for LIEC and its customers.

The above options are displayed in Table 1 below.

Table 1: Proposed Rates for Services

	2016		2017	
	Current	Option 1 0% Increase	Option 2 2% Increase	Option 3 4% Increase (Recommended)
 Capacity Charge monthly charge per square foot of the building gross floor area 	\$0.0476	\$0.0476	\$0.0486	\$0.0495
 Volumetric Charge charge per megawatt hour of energy consumed by the building 	\$29.328	\$29.328	\$29.915	\$30.501

LIEC is a service provider appointed by Council to provide energy services to OVDEU customers on behalf of the City. City Council is the regulator and the rate setting body for the OVDEU service area. In accordance with this structure, LIEC staff have prepared the above rate analysis, and LIEC's Board of Directors has reviewed and approved the recommended 2017 OVDEU rate for services.

Financial Impact

None. The 4% rate increase will result in the revenue increase which will offset the operating and capital costs following the principle of full cost recovery as modeled in the OVDEU financial model.

Conclusion

The recommended 4% increase (Option 3) for the 2017 OVDEU service rate supports Council's objective to keep the annual energy costs for OVDEU customers competitive with conventional energy costs, based on the same level of service. As a comparison to conventional system energy costs, the proposed 4% rate increase is below the combined estimated rate increase of 7% by BC Hydro and Fortis.

At the same time, the proposed rate ensures cost recovery of the capital and operating costs, and that the OVDEU business is cost neutral over time for City of Richmond residents. Staff will continuously monitor energy costs and review the rate to ensure rate fairness for the consumers and cost recovery for the City.

Doru Lazar Senior Project Manager (604-204-8695) JI:dl

2 /2

Alen Postolka, P.Eng., CP, CEM District Energy Manager (604-276-4283)

Att. 1: Oval Village District Energy Utility Bylaw No. 9134, Amendment Bylaw No.9622Att. 2: Oval Village District Energy Utility Map (as of Sept 2016)

Attachment 1



Bylaw 9622

Oval Village District Energy Utility Bylaw No. 9134 Amendment Bylaw No. 9622

The Council of the City of Richmond enacts as follows:

- 1. The **Oval Village District Energy Utility Bylaw No. 9134** is amended by deleting **Schedule D (Rates and Charges)** of the Bylaw in its entirety and replacing it with a new Schedule D as attached as Schedule A to this Amendment Bylaw.
- 2. This Bylaw is cited as "Oval Village District Energy Utility Bylaw No. 9134".

FIRST READING	 CITY OF RICHMOND
SECOND READING	 APPROVED for content by originating dept.
THIRD READING	 TP .
ADOPTED	 APPROVED for legality by Solicitor
	D

MAYOR

CORPORATE OFFICER

Schedule A to Amendment Bylaw No. 9622

SCHEDULE D

Rates and Charges

PART 1 - RATES FOR SERVICES

The following charges, as amended from time to time, will constitute the Rates for Services:

- (a) capacity charge a monthly charge of \$0.0495 per square foot of gross floor area; and
- (b) volumetric charge a monthly charge of \$30.501 per megawatt hour of Energy returned from the Heat Exchanger and Meter Set at the Designated Property.

PART 2 - EXCESS DEMAND FEE

Excess demand fee of \$0.14 for each watt per square foot of the aggregate of the estimated peak heat energy demand referred to in section 19.1(e) (i), (ii), and (iii) that exceeds 6 watts per square foot.







Re:	Alexandra District Energy Utility Bylaw No. 8641,	Amend	ment Bylaw No. 9617
From:	John Irving, P.Eng. MPA Director, Engineering	File:	10-6600-10-02/2016- Vol 01
То:	Public Works and Transportation Committee	Date:	September 15, 2016

Staff Recommendation

That the Alexandra District Energy Utility Bylaw No. 8641, Amendment Bylaw No. 9617 be introduced and given first, second and third readings.

John Irving, P.Eng. MPA Director, Engineering (604-276-4140)

Att. 3

REPORT CONCURRENCE						
ROUTED TO:	CONCURRENCE	CONCURRENCE OF GENERAL MANAGER				
Finance Department Law						
REVIEWED BY STAFF REPORT / AGENDA REVIEW SUBCOMMITTEE	INITIALS: DW	APPROVED BY CAO				

Staff Report

Origin

In 2010, Council adopted the Alexandra District Energy Utility Bylaw No. 8641 establishing the rate for the delivery of energy for space heating, cooling and domestic hot water heating within the Alexandra District Energy Utility (ADEU) service area.

The purpose of this report is to recommend 2017 ADEU service rates.

This report supports Council's 2014-2018 Term Goal #4 Leadership in Sustainability:

Continue advancement of the City's sustainability framework and initiatives to improve the short and long term livability of our City, and that maintain Richmond's position as a leader in sustainable programs, practices and innovations.

4.1. Continued implementation of the sustainability framework.

4.2. Innovative projects and initiatives to advance sustainability.

Background

ADEU has been operating since 2012 as a sustainable energy system which provides a centralized energy source for heating, cooling and domestic hot water heating for residential and commercial customers located in the Alexandra/West Cambie neighbourhood. ADEU assists in meeting the community-wide greenhouse gas emission reduction targets adopted as part of Richmond's Sustainability Framework by providing buildings with renewable low carbon energy through geo-exchange technology.

Since 2012, the West Cambie neighbourhood has seen rapid redevelopment. ADEU has also been growing to meet this increased energy demand, most recently cumulating in the completion of the construction and commissioning of the Phase 3 expansion in November 2015. This expansion more than doubled the capacity of ADEU's renewable energy generation capacity by adding a second geo-exchange field. Additionally, it increased the size of the energy centre building while adding two 2,550 kW evaporative fluid coolers and three 1,500 kW condensing boilers. The Phase 3 expansion is projected to ensure the ADEU system will meet the energy demands of the neighbourhood as it continues to grow.

The system currently provides energy to six developments (Mayfair Place, Remy, Omega, Alexandra Court, Richmond Jamatkhana and Townline Oxford Lane) connecting over 1100 residential units and over 1 million square feet of floor area. ADEU's first commercial customers, with more than 280,000 ft² of serviced floor area, will be connected before the end of 2016. See Attachment 2 for informational map.

As of June 30, 2016 (end of the second billing quarter), the ADEU system has delivered 7279 MWh of energy to customers for space heating, cooling and domestic hot water heating. While some electricity is consumed for pumping and equipment operations, almost 100% of this energy

September 15, 2016

was produced locally from the geo-exchange fields located in the greenway corridor and West Cambie Park. The backup and peaking natural gas boilers and cooling towers in the energy centre have operated only for a few days throughout the system's operation to date. Staff estimate that ADEU has eliminated 1348 tonnes of GHG emissions¹ to the community (see Attachment 1) and are currently evaluating these reductions as GHG reductions as eligible offsets for neutralizing corporate GHG emissions.

In October 2016, City Council authorized the transfer of ownership of all City owned district energy assets to the Lulu Island Energy Company (LIEC). All of the ADEU assets and infrastructure were included in this transfer. The transfer of these assets will allow LIEC to fulfill its Council directed mandate to manage all district energy utilities on the City's behalf. LIEC will look to continue building on the strong operational, environmental and financial performance that ADEU has shown in its first few years of operation, while Council will continue to have sole authority on rate setting.

Analysis

The ADEU service area is comprised of two different use areas: the main service area which is mostly residential and Area A which contains large format retail buildings. The rate for each of the areas was established to ensure that ADEU costs reflect Council's objective to implement low carbon solutions and maintain annual energy costs that are competitive with conventional system energy costs, based on the same level of service. At the same time, the rates ensure cost recovery to offset the City's capital investment and ongoing operating costs.

The 2016 rate for customers in the ADEU service area, excluding Area A, is comprised of:

- Capacity Charge (Fixed) monthly charge of \$0.087 per square foot of the building gross floor area, and a monthly charge of \$1.170 per kilowatt of the annual peak heating load supplied by DEU, as shown in the energy modeling report required under Section 21.1.(c); and
- 2. Volumetric Charge (Variable) charge of \$3.743 per megawatt hour of energy consumed by the building.

The 2016 rate in effect for Area A is comprised of:

1. Volumetric charge – a charge of \$66.92 per megawatt hour of Energy returned from the Heat Exchanger and Meter Set at the Designated Property calculated on each of (i) an energy use of 2644 MWh per annum ("Basic Supply Amount"), and (ii) any energy use in excess of the Basic Supply Amount.

Factors that were considered when developing the 2017 ADEU rate options include:

• **Competitive Rate:** The rate should provide end users with annual energy costs that are less than or equal to conventional system energy costs, based on the same level of service.

¹ Assumed that all energy was provided for heating. The business-as-usual (BAU) assumed that 40% of the building heating load would be provided from electricity and the remaining 60% would be from gas make-up air units.

- **Cost Recovery:** ADEU was established on the basis that all capital and operating costs would ultimately be recovered through revenues from user fees. The financial model includes recovery of the capital investment over time and built in a rate increase year over year to cover the fuel cost increases, inflation, etc. to ensure the financial viability of the system.
- Forecasted Utility Costs: Utility cost (electricity and natural gas) increases are outside the City's control. However, these commodity costs directly impact the operation cost of ADEU. BC Hydro's 10 year plan projects an electricity rate increase of 3.5% in fiscal year 2017. Natural gas costs are increasing from October 1, 2016 by approximately 11.9% for a typical residential customer in Lower Mainland according to the British Columbia Utilities Commission Order Number G-145-16.
- **Consumer and Municipal Price Indexes:** Other factors to consider include various price indexes. For example, the Consumer Price Index (CPI) is estimated by the Finance Department at 2.1% based on the Conference Board of Canada Metropolitan Outlook 1 Spring 2016, while the Municipal Price Index (MPI) is estimated at 2.7%, also estimated by the City's Finance Department.

Taking into consideration the above factors, three options are presented here for consideration.

Option 1 – No increase to ADEU rate for services (Not recommended)

Under the Option 1, the rate would not change from the 2016 rate.

ADEU remains a young utility; early in its operational life. The development of the West Cambie neighbourhood is still in progress and ADEU is continuously expanding. Collection and analysis of actual data about ADEU's connected buildings' energy loads and consumption, operation and maintenance costs is on-going; however, the data is still limited due to constant expansion and system change. As a result, ADEU's utility (electricity and natural gas), operational, and maintenance costs are still largely based on the projections of the financial model. Variation from the model will affect the long term performance of ADEU. For example, actual revenue will vary from the projected revenue in the financial model depending on the speed of the neighbourhood's development and occupancy.

The ADEU financial model has taken into consideration modest rate increases similar to the projected rate increases for the conventional utility providers' energy. A zero rate increase could have a negative impact on the financial performance of ADEU. For example, it may cause an extension of the payback period, reduction of internal rate of return, etc. As a result, this option is not recommended.

Option 2 – 2% increase to ADEU rate for services (Not recommended)

Under this option, the rate would increase modestly to slightly less than the Consumer Price Index (CPI – projected at 2.1%). While a 2% rate increase will partially cover the estimated utility (electricity and natural gas), operation, and maintenance cost increases, it is less than the "business as usual" (BAU) cost of energy commodity (electricity and natural gas) increases that customers not

September 15, 2016

serviced by ADEU would face. Similarly it is below the increase projected in the ADEU financial business model. Due to the fact that Business As Usual costs are expected to increase more than the Consumer Price Index (CPI) and it is still very early in ADEU's operational life, this option is not recommended.

Option 3 – 4% increase to ADEU rate for services (Recommended)

The proposed 4% rate increase under this option follows the ADEU financial model and is well below the estimated rate increase of around 7% that customers would pay for the energy from the conventional utility system. This 7% blended increase is based on 3.5% increase of electricity cost and 11.9% increase of natural gas cost. The BAU scenario assumes that 40% of the building heating load would be provided from electricity and the remaining 60% would be from gas make-up air units. Non-fuel BAU costs are assumed to be 25% of total costs and that they increase by CPI.

The ADEU financial model follows the principle of full cost recovery. To mitigate potential financial risks, it is recommended that the City follow the financial model in the early years of the utility operation and annually adjust the rates accordingly. As more data is collected about the connected building's energy loads and consumption and operation and maintenance costs, the model will be continuously updated and annual rate adjustment may follow closer year to year financial indicators, to ensure that the business is sustainable, economically viable and beneficial for LIEC and its customers.

Table 1: Proposed Rates for Services, excluding Area A

	2016	2017 Option 1 0% Increase	2017 Option 2 2% Increase	2017 Option 3 4% Increase
Capacity Charge One: Monthly charge per square foot of the building gross floor area	\$0.087	\$0.087	\$0.089	\$0.090
Capacity Charge Two: Monthly charge per kilowatt of the annual peak heating load supplied by DEU	\$1.170	\$1.170	\$1.193	\$1.217
Volumetric Charge: Charge per megawatt hour of energy consumed by the building	\$3.743	\$3.743	\$3.818	\$3.893

Table 2: Proposed Rates for Services, Area A

	2016	2017	2017	2017
		Option 1 0% Increase	Option 2 2% Increase	Option 3 4% Increase
Volumetric Charge: Charge per megawatt hour of energy consumed	\$66.92	\$66.92	\$68.26	\$69.60

The recommended rate outlined in the proposed Alexandra District Energy Utility Bylaw No. 8641, Amendment Bylaw No. 9617 (Attachment 3), represents full cost recovery for the delivery of energy within the ADEU service area.

Financial Impact

None. The 4% rate increase will result in the revenue increase which will offset the operating and capital costs following the principle of full cost recovery as modeled in the ADEU financial model.

Conclusion

The recommended 4% increase (Option 3) for the 2017 ADEU service rate supports Council's objective to keep the annual energy costs for ADEU customers competitive with conventional energy costs, based on the same level of service. As a comparison to conventional system energy costs, the 4% rate increase is below the combined estimated 7% rate increase for BC Hydro and Fortis. The rate increase also ensures cost recovery to offset the City's capital investment and operating costs. Staff will continuously monitor energy costs and review the rate to ensure rate fairness for consumers and cost recovery for the City.

FOR: Al Por

Kevin Roberts Project Engineer, District Energy (604-204-8512)

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Ym Alen Postolka Manager, District Energy

(604-276-4283)

Att.1: Green House Gas Emissions Reduction Graph Att.2: Lower Mainland DEU Provider – Rate Comparison Graph Att.3: Alexandra District Energy Utility Bylaw No. 8641 Amendment Bylaw No. 9617



Attachment 1 – ADEU Green House Gas (GHG) Emission Informational Graph

¹ Assumed that all energy was provided for heating. The business-as-usual (BAU) assumed that 40% of the building heating load would be provided from electricity and the remaining 60% would be from gas make-up air units.


Attachment 2 – Alexandra Neighbourhood and ADEU Service Area Informational Map



Bylaw 9617

Alexandra District Energy Utility Bylaw No. 8641 Amendment Bylaw No. 9617

The Council of the City of Richmond enacts as follows:

1. The Alexandra District Energy Utility Bylaw No. 8641, as amended, is further amended:

- a) by deleting Schedule C (Rates and Charges) in its entirety and replacing with a new Schedule C attached as Schedule A to this Amendment Bylaw.
- 2. This Bylaw is cited as "Alexandra District Energy Utility Bylaw No. 8641, Amendment Bylaw No. 9617".

FIRST READING SECOND READING THIRD READING ADOPTED

	CITY OF RICHMOND
	APPROVED for content by originating dept.
	KR
· · · · · · · · · · · · · · · · · · ·	APPROVED for legality by Solicitor
	DAS

MAYOR

CORPORATE OFFICER

Bylaw 9617

Schedule A to Amendment Bylaw No. 9617

SCHEDULE C to BYLAW NO. 8641

Rates and Charges

PART 1 - RATES FOR SERVICES

The following charges will constitute the Rates for Services for the Service Area excluding shaded Area A as shown in Schedule A to this Bylaw:

- (a) Capacity charge a monthly charge of \$0.090 per square foot of Gross Floor Area, and a monthly charge of \$1.217 per kilowatt of the annual peak heating load supplied by DEU as shown in the energy modeling report required under Section 21.1(c); and
- (b) Volumetric charge a charge of \$3.893 per megawatt hour of Energy returned from the Heat Exchanger and Meter Set at the Designated Property.

PART 2 - RATES FOR SERVICES APPLICABLE TO AREA A

The following charges will constitute the Rates for Services applicable only to the Designated Properties identified within the shaded area (Area A) shown in Schedule A to this bylaw:

 (a) Volumetric charge – a charge of \$69.60 per megawatt hour of Energy returned from the Heat Exchanger and Meter Set at the Designated Property calculated on each of (i) an energy use of 2644 MWh per annum ("Basic Supply Amount"), and (ii) any energy use in excess of the Basic Supply Amount.



Re:	2016 Submission to the National Disaster Mitiga Steveston Island Flood Mitigation Planning Proje Strategy Update	ation Pr ect and t	ogram: he Flood Mitigation
From:	John Irving, P.Eng. MPA Director, Engineering	File:	10-6060-01/2016-Vol 01
То:	Public Works and Transportation Committee	Date:	September 30, 2016

Staff Recommendation

- 1. That the submission to the National Disaster Mitigation Program requesting funding for up to 100 % of the \$2,120,000 cost for Steveston Island Flood Mitigation Planning Project and the Flood Mitigation Strategy Update be endorsed;
- 2. That the Chief Administrative Officer and the General Manager of Engineering and Public Works be authorized to enter into funding agreements with the Government of Canada and/or the Province of BC for the above mentioned projects should they be approved for funding by the Government of Canada; and
- 3. That, should the above mentioned projects be approved for funding by the Government of Canada, the 2017 Capital Plan and the 5-Year Financial Plan (2017-2021) be updated accordingly.

John Irving, P.Eng. MPA Director, Engineering (604-276-4140)

Att. 3

REPORT CONCURRENCE				
ROUTED TO:	CONCURRENCE	CONCURRENCE OF GENERAL MANAGER		
Finance Department Sewerage & Drainage	r L	(2)		
REVIEWED BY STAFF REPORT / Agenda Review Subcommittee	Initials: DW	APPROVED BY CAO		

Staff Report

This report supports Council's 2014-2018 Term Goal #5 Partnerships and Collaboration:

Continue development and utilization of collaborative approaches and partnerships with intergovernmental and other agencies to help meet the needs of the Richmond community.

This report supports Council's 2014-2018 Term Goal #6 Quality Infrastructure Networks:

Continue diligence towards the development of infrastructure networks that are safe, sustainable, and address the challenges associated with aging systems, population growth, and environmental impact.

6.1. Safe and sustainable infrastructure.

This report supports Council's 2014-2018 Term Goal #7 Strong Financial Stewardship:

Maintain the City's strong financial position through effective budget processes, the efficient and effective use of financial resources, and the prudent leveraging of economic and financial opportunities to increase current and long-term financial sustainability.

7.4. Strategic financial opportunities are optimized.

Origin

On September 22, 2016, Emergency Management BC (EMBC) announced a call for proposals from local governments for the National Disaster Mitigation Program (NDMP). Each project is eligible to receive up to 50% federal funding and up to 50% provincial funding. Funding under the NDMP is intended to reduce, or even negate, the effects of flood events. Funding is available for risk assessments, flood mapping, mitigation planning and investments in non-structural and small scale structural mitigation projects. A summary of the program is included (Appendix 1) for information. EMBC will review and prioritize all submissions and forward their recommendations to the Government of Canada for funding consideration.

The deadline for proposals was October 7, 2016. Given the short deadline, staff submitted two proposals: the Steveston Island Flood Mitigation Planning Project and the Flood Mitigation Strategy Update. The purpose of this report is to seek Council's endorsement on the submission to EMBC for the NDMP grant funding for up to 100% of the cost of both projects of \$2,120,000.

Analysis

In recognition of increasing disaster risks and costs, the Federal Budget 2014 earmarked \$200 million over five years to establish the National Disaster Mitigation Program (NDMP) as part of the Federal Government's commitment to build safer and more resilient communities. The NDMP is intended to address rising flood risks and costs, and build the foundation for informed mitigation investments that could reduce, or even negate, the effects of flood events.

The NDMP will be an annual program, with a yearly intake to the Province of BC through EMBC every October 31, following this initial intake. The Province will apply on behalf of the

submitted projects they have prioritized and redistribute the funds to municipal and regional governments responsible for disaster mitigation.

Four funding streams have been identified by the program:

- 1. Risk Assessments
- 2. Flood Mapping
- 3. Mitigation Planning
- 4. Investments in Non-structural and Small Scale Structural Mitigation Projects

Staff submitted two projects to NDMP requesting grant funding:

Project	Total Estimated Cost	Category	Potential Provincial Contribution	Potential Federal Contribution
Steveston Island Flood Mitigation Planning	\$1,620,000	Mitigation Planning	Up to 50% of eligible costs (\$810,000)	Up to 50% of eligible costs (\$810,000)
Flood Mitigation Strategy Update	\$500,000	Mitigation Planning	Up to 50% of eligible costs (\$250,000)	Up to 50% of eligible costs (\$250,000)
Total Request	\$2,120,000			

Steveston Island Flood Mitigation Planning is in the 5 Year Financial Plan for 2017 and will be brought forward for Council's consideration as part of the 2017 Capital Plan.

Flood Mitigation Strategy Update includes the Dike Master Plan Phase 3, Flood Management Strategy Update and Pump Station Condition Assessment Update. There is existing capital funding for the Dike Master Plan Phase 3. The Flood Management Strategy Update and Pump Station Condition Assessment Update are in the 5 Year Financial Plan for 2017 and will be brought forward for Council's consideration as part of the 2017 Capital Plan.

Funding Details

The NDMP operates through a 50% federal and 50% provincial funding model. The maximum level of assistance from all federal institutions must not exceed 50% of total eligible project costs for provinces. The Province of BC has indicated that if there is no funding available from the Provincial Government, the City of Richmond will only receive up to 50% funding from the Government of Canada.

Should the funding requests be successful, the City would be required to enter into funding agreements with the Province of BC and/or the Government of Canada. The agreements are standard form agreements provided by senior levels of government and include an indemnity and release in favour of the Provincial and Federal Government. As with any submission for funding to external sources, funding is not guaranteed to be granted to assist with this project.

Financial Impact

The City of Richmond will be requesting up to \$2,120,000 for funding for two mitigation planning projects from the National Disaster Mitigation Program through Emergency Management BC. The fund may grant up to 100 % of total eligible costs.

Steveston Island Flood Mitigation Planning will be brought forward for Council's consideration as part of the 2017 Capital Plan.

Flood Mitigation Strategy Update includes the Dike Master Plan Phase 3, Flood Management Strategy Update and Pump Station Condition Assessment Update. There is existing capital funding for the Dike Master Plan Phase 3. The Flood Management Strategy Update and Pump Station Condition Assessment Update will be brought forward for Council's consideration as part of the 2017 Capital Plan.

Conclusion

Staff are seeking Council's endorsement on two projects already submitted to the National Disaster Mitigation Program. The projects have been submitted to the Province of BC and will be initially evaluated through Emergency Management BC. Richmond is requesting up to 100% funding for Steveston Island Flood Mitigation Planning Project and the Flood Mitigation Strategy Update.

Lloyd/Bie, P. Eng Manager, Engineering Planning (604-276-4075)

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Denise A Tambellini Manager, Intergovernment Relations and Protocol Unit (604-276-4349)

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- Att. 1: National Disaster Mitigation Program Summary
 - 2: National Disaster Mitigation Program Project Proposal Form Steveston Island Flood Mitigation Planning Project
 - 3: National Disaster Mitigation Program Project Proposal Form Flood Mitigation Strategy Update

Attachment 1: National Disaster Mitigation Program Summary

National Disaster Mitigation Program (NDMP)

Overview

In recognition of increasing disaster risks and costs, Budget 2014 earmarked \$200 million over five years to establish the National Disaster Mitigation Program (NDMP) as part of the Government's commitment to build safer and more resilient communities. The NDMP will address rising flood risks and costs, and build the foundation for informed mitigation investments that could reduce, or even negate, the effects of flood events.

The NDMP fills a critical gap in Canada's ability to effectively mitigate, prepare for, respond to, and recover from, flood-related events by building a body of knowledge on flood risks in Canada, and investing in foundational flood mitigation activities. Knowledge that is up-to-date and accessible will not only help governments, communities and individuals to understand flood risks and employ effective mitigation strategies to reduce the impacts of flooding, but will also further discussions on developing a residential flood insurance market in Canada.

Main Objectives

The NDMP was established in April 2015 to reduce the impacts of natural disasters on Canadians by:

- Focusing investments on significant, recurring flood risk and costs; and
- Advancing work to facilitate private residential insurance for overland flooding.

Eligibility

Provincial and territorial governments are the eligible recipients for funding under the NDMP. However, provincial and territorial authorities may collaborate with, and redistribute funding to eligible entities, such as municipal or other local governments, public sector bodies, private sector bodies, band councils, international non-government organizations or any combination of these entities.

Program Components

Of the NDMP's \$200 million, the NDMP has an allotment of approximately \$183 million for NDMP projects that will be cost-shared with the provinces and territories (up to 50 per cent of eligible provincial projects and up to 75 per cent of eligible projects in the territories). Projects will be selected for funding through a competitive, merit-based process using objective and measurable criteria.

There are four funding streams available under the NDMP:

Risk Assessments

This stream provides funding for the completion of risk assessments to inform flood risks. Risk assessments are the foundational step in disaster mitigation. These risk assessments will identify flood hazards; potential impacts; and community and infrastructure vulnerabilities as well as the overall flood risk profile for the area.

Flood Mapping

This stream provides funding for the development and/or modernization of flood maps to further address flood risks. A flood map identifies the boundaries of a potential flood event based on type and likelihood and can be used to help identify the specific impacts of a flood event on, for example, structures, people and assets.

Mitigation Planning

This stream provides funding for the development and/or modernization of mitigation plans to address flood risks. A comprehensive mitigation plan allows applicants to develop realistic and sustainable mitigation solutions by clearly outlining the plan's objectives, key activities, expected outputs, timelines, and roles and responsibilities.

Investments in Non-structural and Small Scale Structural Mitigation Projects

This stream provides funding for other non-structural and small scale structural disaster mitigation projects. Eligible projects would include actions such as the replacement of storm culverts, or projects that improve flood resilience by proactively preventing or mitigating damages and losses.

In general, provinces and territories can access any funding stream; however, there must be evidence to indicate that proposals are evidence-based. For example, applicants for flood mapping funding must indicate that their perceived need for flood mapping was informed by a risk assessment. Applicants for mitigation planning must demonstrate that their proposals reflect a need to prevent or mitigate identified and significant flood risks.

Further, provinces and territories can apply to access different streams of funding for different projects.

In addition to the funds that will be dedicated to cost-shared projects with provinces and territories, the NDMP will also assist in building the foundation for future, informed proactive prevention and mitigation by investing \$17 million in three key areas:

- Risk, resilience and return on investment tools to provide provinces, territories and communities with the needed information and capacity to plan and evaluate their flood mitigation projects;
- A risk and resilience repository that will collect, store, manage and share NDMP information to inform future policy and program direction for all levels of government; and
- Public awareness and engagement activities

ATTACHMENT 2

National Disaster Mitigation Program

Project Proposal Form

A) Applicant Contact Information

i) Province/Territory

Note: If more than one province/territory is involved in this proposed project, please identify the province/territory that will be leading this project.

1) Name:	· · · · · · · · · · · · · · · · · · ·	-	2) Title:		
Province of British Colum	bia	-			
3) Organization (i.e. Pro	Organization (i.e. Province/Territory): 4) Telephone Number:		5) Facsimile Nun	ıber:	
Emergency Management BC (EMBC)		(604) 586-4390	(604) 586-4334		
6) Email Address:		7) Date (dd/mm/	уууу):		
embcfloodprotection@go	v.bc.ca				
ii) Original Applicat	nt(s) (i.e. "the entity/	ies", if applica	able)		
1) Name:			2) Title:		-
Denise Tambellini			Manager Intergovernme	ntal Relations and Protocol	Unit
3) Organization:			4) Telephone Number:	5) Facsimile Nur	nber:
City of Richmond			(604) 276-4349	(604) 276-4222	
6) Email Address:				7) Date (dd/mm/	уууу):
dtambellini@richmond.ca				30/09/2	.016
B) Project Details an	d Attestations				
8) Project Stream			Stream 1: R	isk Assessment(s)	
Identify the NDMP Pro	oject Stream relative to	this project sub	mission.	lood Mapping	
Note: Each project str	eam has different requi	rements and me			
Criteria.	ocifics on each stream		🔀 Stream 3: N	litigation Planning	
See Section C for shi			🔄 Stream 4: Ir	vestment in Non-Structur	alor
				Small Scale Structural Mitig	jation
9) Project Title:					
Flood Mitigation Strategy	Update				
10) Project Timeline:			-		
a) Duration of Project:		b) Projected St	tart Date or proposed	c) Projected End Date of	proposed
Months:	Years:	project: (dd/	ппп/уууу)	project: (dd/mm/yyyy)	
3	1	0	1/01/2017	31/03/2018	
11) Estimated Total Cos	st of Project		a) Total of non-federal costs:		\$250,000.00
(Please complete th	e Budget Template [Se	ection D]).	b) Total federal costs:	deral costs:	
		c) Total Project cost (i.e. a + b):		\$500,000.00	
12) Project Description					
a) Provide a brief description of your proposed project. Climate change scientists estimate that sea level will rise approximately 1 m over the next 100 years. Combined with 0.2 m of subsidence that is expected in that same time period, Richmond will be required to raise dikes by 1.2 m to accommodate these changes.					
As a city surrounded by ocean and river, the City of Richmond is under constant threat of flooding. In our Flood Protection Strategy, the City has identified risks, mitigation goals, and objectives/strategies required to make more informed planning decisions for the citizens and businesses that call Richmond home.					
The Flood Mitigation Strategy Update includes the mitigation planning for the Dike Master Plan Phase 3, Flood Management Strategy Update and Pump Station Condition Assessment Update.					

- Environmental Permitting and Monitoring (for Investigation Work only)
- Archaeological Permitting and Monitoring (for Investigation Work only)
- b) Describe how this project addresses one or more high risk communities and/or a flood mapping activity.
 Note: b) is not applicable for Stream 1: Risk Assessment(s). Risk Assessments will help identify areas that may be at risk, as well as help to determine the level of risk.

(Please provide your responses in bullet form.)

The City of Richmond is at the forefront of flood protection in the Province of BC as the entire community is contained within the floodplain of the Fraser River, below historic high water levels and subject to freshet events, tidal flood events and internal drainage challenges. Richmond is approximately 1m above mean sea level and protected by 49 km of dike. Climate change scientists estimate that sea level will rise approximately 1 m over the next 100 years. Combined with 0.2 m of subsidence that is expected in that same time period, Richmond will be required to raise and build new dikes to meet future water levels. This project addresses the flood mitigation planning required to build a new dike on Steveston Island as recommended and endorsed by Council through Richmond's Dike Master Plan Phase 1.

Disaster mitigation is essential to protect not only residents, farms and businesses, but municipal, Provincial and Federal infrastructure. On land, this includes Highway 99 which is the main thoroughfare connecting the 15 freeway from Seattle to Vancouver and Vancouver International Airport (YVR). On water, Richmond is along a major shipping route to the port terminals along the Fraser River. Other risks to Richmond include toxic spills along the Fraser River, train and aircraft accidents as Richmond is home to YVR. Partners that may be impacted without disaster mitigation infrastructure from this project include YVR, Transport Canada, BC Ministry of Transportation and Infrastructure and others.

Approximately 220,000 people, \$50 billion worth of assets and over 13,000 businesses that employ 140,000 people call Richmond home. The rapidly growing City Centre has over 4,000 businesses, total commercial space of almost 10 million ft2 and over 30,000 employees. The City Centre population is anticipated to increase by 30,000 residents in the next 10 years. Without this disaster mitigation planning as delivered under the Flood Mitigation Strategy Update, the impact on human lives and Canada's economy that would result from a flood disaster is tremendous and cannot be quantified.

13)

 a) How will this project benefit the defined geographical area an (Please provide your response in bullet-form.) The existing Steveston dike is in close proximately to commercia current dike would be extremely disruptive to the community. Additionally, historic assets are out of the dike and prone to seas The Steveston Island alignment preserves the heritage nature of change induced sea level rise for Richmond. 	d the surrounding communities? I and residential buildings. Increasi conal flooding. Steveston while providing long term	ing the elevatio	n of this om climate	
b) Were surrounding communities informed of this projected pro	oposal? Xes	No		
Comments: Through the Dike Master Plan Phase I, between September and D held. Key stakeholders generally favoured the creation of a new di community disruption and maximizing scope for long-term dike up - Steveston 20/20 - Provincial Inspector of Dikes - Steveston Harbour Authority - Department of Fisheries and Oceans - Port Metro Vancouver - Provincial Land Tenure Department - The City's Advisory Committee for the Environment - The City's Heritage Commission - The Urban Development Institute	ecember 2012, a series of key sta ke alignment on Steveston Island I ogrades. Key stakeholders included	ikeholder meet based on minin d:	ings were nizing	
14) Affected Community(ies)				
Notes: a) Identify all communities that are affected by this project. b) Indicate the population of all identified communities. c) Indicate if each identified community has been engaged in relation to this proposed project (E); and d) Indicate if each identified community has commited to support this proposed project (C).				
Name:	Population:	(E)	(C)	
City of Richmond	220,000	\square	\square	
Name:	Population:	(E)	(C)	
Metro Vancouver (including Richmond)	2,464,000			

		Population:	(E)	(C)
Musqueam Ir	ndian Band	1,500	\square	\square
15) How will this	project contribute to the following?			
(please provi	de your responses in bullet-form)			
a) Reducing (i.e. Descrit	Impacts of disasters on Canadians? be, in bullet form, how the proposed mitiga	tion project will reduce or negate the impa	ct and/or likelihoo	d of disasters
- The Stevest	on Dike Upgrade Project will provide future	e flood protection to all of Richmond to a	ddress long-term	sea level rise
and associate	ed flood risks. Building a long-term diking s	solution on Steveston Island will protect \$	50 billion worth of	assets on
- Flooding is a	a primary risk for the City of Richmond and	l maintaining a high level of flood protecti	on is the primary (nnal of this
program.				<u>jour or true</u>
- The Dike Ma	aster Plan Phase 1 outlined two distinct ali	gnment concepts for Steveston. One alig	nment option was	to raise the
lsland to clos	e the harbour. The recommendation out o	f the Dike Master Plan Phase 1 was the s	econd alignment i	g Steveston to re-alian the
dike along St	eveston Island and this recommendation v	vas endorsed by Council.		ie ie angli an
- The 3km lor	ng section of dike that stretches between (Garry Point Park and London Farm will re	quire raising and s	strengthening
- The Stevest	on Island Flood Mitigation Planning Projec	t will identify geotechnical, environmental	and archaeologic	al conditions
on Steveston	Island to determine if appropriate for dike	construction.	5	_
- If the Steves	ston Island Flood Mitigation Planning does	not proceed, construction of the long-ter rm dike alignment on Steveston Island do	m dike alignment	on Stevestor
potentially Rid	chmond will be inundated by climate change	ge induced sea level rise.		
b) Reducing o	disaster related financial liabilities for all leve	els of aovernment?		
		J		
The Stevesto	n Island dike will protect over \$50 billion in	assets, including Highway 99, rail facilitie	s, and Port of Var	ncouver
The Stevesto shipping facil c) Reducing r	n Island dike will protect over \$50 billion in ities. isk, developing capacity and/or enhancing	assets, including Highway 99, rail facilitie resilience?	s, and Port of Var	ncouver
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9) Stakeholders:
 a) Identify all stakeholders/partnerships and describe their current and/or potential level of engagement, as applicable. b) Identify those stakeholders/partners who have committed support, either in-cash or in-kind, for the proposed project. c) Provide a description/summary of the stakeholder list, and how this information provides a rationale/justification for implementing this mitigation activity.
Please provide your answers in the Stakeholders Template (Section D).
0) Project Implementation Risks (Please provide your response in bullet-form):
a) Identify any project implementation risks that may impact your ability to deliver the project as planned/scheduled - Steveston Island Mitigation Planning project scheduling is dependent upon appropriate timing windows as described in detail in the Preliminary Investigation Management Plan by Golder Associates to accommodate active breeding season for species at risk, in-water drilling during the window of least risk for the Fraser River Estuary to protect fish and site prep and drilling outside of breeding bird season where possible. Optimization of project schedule is crucial to reduce potential environmental effects.
 b) Outline the mitigation measures that you will take to minimize and/or address your project's implementation risks Complete field survey in advance of other investigation components so that the preliminary dike design and alignment can be confirmed prior to laying out actual test hole locations Investigation, survey work, Phase 1 ESA and initial ecological assessment be carried out at the same time and in advance of drilling and environmental investigations Geotechnical and Phase 2 ESA drilling be combined to reduce potential disturbance to environmentally sensitive areas.
1) Monitoring and Performance Management (Please provide your response in bullet-form):
Describe the internal measures that you will implement to monitor your project and manage performance. - Hire a consultant to full-time project manage the scope of the Steveston Island Mitigation Planning Project - Hold weekly conference calls between the City and the consultant to ensure targets and major milestones are met - Hold monthly meetings between the City and consultant to manage performance
2) Official Languages In order to support Public Safety Canada's obligations under Part VII of the Official Languages Act, the applicant must indicate whether the needs of official language minority communities were considered, where appropriate (such as for stakeholder engagement activities)
a) Have the needs of official language minority communities been considered?
 b) What will the (lead) province or territory do to address official languages requirements for linguistic minorities, as per the Official Languages Act, with respect to this project? All needs and considerations of official language minority communities have been addressed as part of the project's ongoing community stakeholder consultations.

government of Canada, including risk information/data, including the completed risk assessment information template; flood maps and associated data, based on the criteria established by PS, for inclusion in a national flood database; and all other relevant project information, such as lessons learned.

24) The province or territory responsible for the implementation of this project agrees to report, in accordance with its contribution agreement, on topics such as the project implementation status, measures for successful implementation, project risk mitigation measures, and financial expenditures.

 X
 1 agree

25) The province or territory responsible for the implementation of this project agrees to publicly recognize the federal government's contribution in any announcement

I agree

26) The province or territory responsible for the implementation of this project agrees to ensure that it takes all necessary steps to prevent the risk of conflicts of interest, including:
 Disclosure of any apparent, actual or potential conflict of interest in compliance with Canada or the Province's laws, regulations or policies, as the case may be, and disclosure of the involvement of any former public servants or public office holders subject to the Values and Ethics Code for the Public Sector, the Conflict of Interest Act, and the conditions of the Parliament of Canada Act;
 Registrant as lobbyists as required under the Lobbying Act (applicants shall provide assurance that, where lobbyists are utilized, they are registered in accordance with the Lobbying Act and that no actual or potential conflict of interest exists nor any contingency fee arrangement);
Role of any Government of Canada official, if a Government of Canada official is to participate on an advisory committee or board. Such involvement must not be seen to be exercising control on the committee or board on the use of funds.
X I agree
 27) NDMP contributions may be provided for the following types of mitigation projects: a) new projects or existing projects that have been developed but have not been identified for funding; and b) non-structural or small scale structural projects.
Does your proposed NDMP meet this description?
C) Additional Required Information for Each NDMP Stream (1-4)

Stream 3: Mitigation Planning	
1) Was a copy of your completed and up-to-date NDMP risk assessment information template (RAIT) covering the geographic area related to this proposed project provided to PS?	
Yes, Previously - File #: Xes, Attached No	
2) Description/Summary of your risk assessment findings. (500 characters max.)	
Flood Risk Economic Assessments conducted for the City indicates a clear need to improve the perimeter ring dike protection for the City. Upgrading 49 kilometres of dike to accommodate climate change induced sea level rise will be performed over to next 25 years in alignment with current sea level rise predictions. The City of Richmond has identified the Steveston Island Fl Mitigation Planning Project as a priority project.	ons he ood
3)	
a) Copy(ies) of the valid flood map(s) covering the geographic area related to this proposed project.	
Was a copy of all valid/current maps provided?	
Yes, Previously - File #: Yes, Attached	
b) Description/Summary	
Provide a description/summary of your valid/current map(s). Richmond's primary line of defense against flooding during freshet events or tidal surges is the existing perimeter diking syst As the elevation of Lulu Island is generally below high water, the area would be flooded without this system during extreme events. The estimated economic damage from an event similar to the 1894 Fraser River flood is \$7.1 billion.	em.
4) Describe how the information in your risk assessment(s) and flood map(s) provide(s) a rationale/justification for completing this mitigation activity.	
Increasing mitigation planning is in direct response to climate change induced sea level rise and increasing rainfall intensity. Flooding is a primary risk for the City of Richmond and maintaining a high level of flood protection is the primary goal of this project. Approximately 220,000 people, \$50 billion in assets, and a high value of economic activity are protected by the City flood protection system and the Steveston Island Flood Mitigation Planning Project is necessary for mitigation.	'S
5) Project Output Attestation:	
 a) All Stream 3 projects must produce a comprehensive mitigation plan and provide it to Public Safety Canada upon completion. b) This project will respect the applicable guidelines, standards and/or methodologies of the province/territory in which 	it is
being undertaken. I agree	

D) Templates		
1. Budget Template	Add Template	Remove Template

Project Budget Revenues for Fiscal Year (April 1 - March 31)

2017 ⁻ **20**18

Project Title: Steveston Island Mitigation Planning

Government Funding: Cash (Municipal, provincial, territorial, and federal) (Note: For federal funding, please specify the federal government department)	Amount
City of Richmond	\$810,000.00
Federal Government	\$810,000.00
Subtotal – Cash	\$1,620,000.00
Government Funding: In-Kind (Municipal, provincial, territorial, and federal) (Note: For federal funding, please specify the federal government department)	Amount
Subtotal – In-Kind	\$0.00
Total Government Funding (subtotal of Cash + subtotal of In-Kind from municipal, provincial, territorial, and federal government sources)	\$1,620,000.00
Total <u>Federal Government</u> Funding (subtotal of Cash + subtotal of In-Kind from all federal government sources)	\$810,000.00
Proportion of Federal Government Contribution (Note: The maximum Federal Contribution is 50% for Provinces and 75% for Territories)	<u> 50 </u> %
Non-government Funding and other: Cash	Amount
Subtotal – Cash	\$0.00
Non-government Funding and other: In-Kind	Amount
Subtotal – In-Kind	\$0.00
Total Non-government Funding and other (subtotal of Cash + subtotal of In-Kind from non-government funding and other sources)	\$0.00
Total Government Funding (Total of <u>government funding</u> + total of <u>non-government funding and other</u>)	\$1,620,000.00

Cash: actual dollar value or revenues/funding received
 In-Kind: non-cash input which is given a cash value.

Project Budget Eligible Expenses for Fiscal Year (April 1 - March 31) 20 17 ⁻ 20 18

Project Title: Steveston Island Flood Mitigation Plan

			Eligible Expen	ditures: Cash	
Eligible Costs (i.e. Categories of work)	Details	Public Safety Canada Funding (NDMP Funds)	Other Government Funding	Non- Government Funding and Other	Total
Consultant Fees	Project Management	\$27,000.00	\$27,000.00		\$54,000.00
Professional Services Support	Geotechnical Investigation - Off-shore and on-shore investigation work, including bore holes, electronic CPTs, marine investigation activities	\$600,000.00	\$6 0 0,000.00		\$1,200,000.00
Professional Services	Field and Bathymetric	\$75,000.00	\$75,000.00		\$150,000.00
Professional Services Support	Environmental Site Assessment - Phase 1 and Phase 2, including aquatic and wildlife habitat identification, at risk species identification and Environmental Protection Plan	\$30,000.00	\$30,000.00		\$60,000.00
Consultant Fees	Environmental Permitting and Monitoring (for investigative work)	\$60,000.00	\$60,000.00		\$120,000.00
Consultant Fees	Archaeological Permitting and Monitoring (for investigative work)	\$15,500.00	\$15,500.00		\$31,000.00
Professional services support	For building a business case	\$2,500.00	\$2,500.00		\$5,000.00
	Subtotal – Cash	\$810,000.00	\$810,000.00	\$0.00	\$1,620,000.00
			Eligible Expend	litures: In-Kind	
Eligible Costs (i.e. Categories of work)	Details	Public Safety Canada Funding (NDMP Funds)	Other Government Funding	Non- Government Funding and Other	Total
					\$0.00
	Subtotal – In-Kind	\$0.00	\$0,00	\$0.00	\$0.00
(Subtotal of Ca	Total Expenditures: sh + subtotal of In-Kind)	\$810,000.00	\$810,000.00	\$0.00	\$1,620,000.00

PWT - 53

List: Eligible Costs

#	Eligible Costs
1	New research and data collection.
2	Flood mapping and forecasting.
3	Flood resistant construction techniques.
4	Hazard mapping and forecasting.
5	Professional services support
6	Purchase of equipment used to undertake mitigation and/or support the implementation of permanent structural mitigation measures
7	Building community partnerships for the purpose of disaster risk reduction.
8	Consultant fees.
9	Hazard, impact, risk, vulnerability and assessments.
10	Development of disaster mitigation plans.
11	Public awareness and education.
12	Building standards and enforcement.
13	Non-structural retrofitting.
14	Land use planning controls.
15	Planning and feasibility activities for structural mitigation investments
16	Land purchases
17	Non-structural measures that will enhance proactive whole-of-community flood mitigation measures and resilience to associated hazards and risks
18	Small-scale structural flood mitigation measures
19	Construction of new permanent structural measures designated to mitigate the impacts of flooding
20	Improvement or modernization of existing permanent structural measures.
21	Post-flood finishing costs for measures undertaken within the eligible period.
22	Measures taken to protect primary residences only.
23	Other permanent structural flood mitigation measures and costs related to post-flood finishing measures
24	Exceptional salary costs, benefits and incidentals.
25	Exceptional administrative costs.
26	Materials.
27	Facilities.
28	Exceptional transportation costs.
29	Other incurred costs that are directly attributed to the implementation of permanent structural and non- structural flood mitigation measures.

List: Ineligible Costs

#	Ineligible Costs
1	Costs relating to events and equipment which are considered to be the routine responsibility of provincial ministries or first responder agencies such as police, fire and ambulance.
2	Ongoing operating and maintenance costs for NDMP initiatives following completion of the project.
3	The value assigned to data that was procured or collected prior to the establishment of the project Contribution Agreement.
4	Administrative costs which are not directly related to a specific NDMP project. Each recipient is expected to absorb the routine costs of doing business. Examples such as regular salaries and benefits, audit costs, office furniture, equipment, office supplies, committee work, administration and supervision of NDMP, are not to be cost-shared. It is recognized that certain proposals incur extraordinary administrative expenses, which are incremental to the routine costs of providing government services; these expenses can be considered for cost-sharing and shall be clearly identified in detail at the proposal stage.
5	Hospitality costs.
6	Mitigation project that would yield only temporary measures (e.g., use of sandbags).
7	Mitigation projects that would create ongoing need for funds from the federal government or from its recipient that cannot be absorbed in their current budget.
8	Any expenditures related to a project already started prior to application for funding and prior to approval.
9	Any expenditures related to a project already started prior toDamages and interests resulting from any action or omission causing harm to a third party for which the Recipient is held civilly liable by a Court and has to pay; or fines under any municipal, provincial, territorial or federal legislation resulting from a transgression by the Recipient, or any amount resulting from any settlement entered into by the Recipient, or imposed by a Court, including an Arbiter, to the Recipient in relation with the funded NDMP project. application for funding and prior to approval.
10	Taxes other than the PST or provincial part of the HST.
11	Projects that address needs that are not related to prevention/mitigation.
12	Costs reimbursed under another Government of Canada program.

2) Work Plan Template

Activities	Tasks	Deliverable(s)/ Product(s)	Resources	Timelines (Start and End Dates)	Considerations/ Comments	
KH H ^a flor Silowerstorn	Draft and release and award RFP	NG P	Staff	Shart Date: 01/01/2013	Staff will be pre-draft RFP for public tender	
Instand Mitogetion Planning Project				End Dute: 20/02/2017		
Geotestanikali Investigation	Off-shore and on- shore investigation work, including bore holes, electronic CPTs, marine investigation activities	Hocludes mistimum of 3 denailed seta holes (10m to 20m depth) for every 300 lineal meters of new dike construction tast holes will be ecross the dike cross-section 38 enese intervals - Additional test holes at specialized structures such as food gates and pump house structures	Consultant - Solid or hollow stem auger techniques for on- shore holes - mud-rotary techniques for off- shore holes - on-shore CPT locations will use a track-mounted drill fig - marine CPT locations will use a drill rig stationed on a floating or jack-up barge platform	Shan Dute 19/07/2015 Cret Dute 20/02/2019	 In-water drilling to be complete between July 16 and February 28, this is least risk for the Fraser River Estuary for the protection of fish Site preparation on- shore and drilling to be complete between August 18 and March 18, to prevent disturbance of bird nests 	
Fields and Barnymetric Scawey	Survey	 Fréité survey for on- sitione energié Battrymetrik: survey for off-sitione energié 	Consultant - off-shore survey requires motorized boat using a side- scan sonar to determine bottom profiling	Start Dane: 01/02/2017 Find Dane 3/0/04/2017	Nàome	
Emiticonmential Silie Assessment	Phase 1 and Phase 2, including aquatic and wildlife habitat identification, at risk species identification and	-Phase 1 - Desktop study to determine the potential for sold and/or groundwater containination within the proported dike	Consultant	Source Clanas: COLVER/2011 2 Lond Clans Sci Color (2011 2	 Phase 2 is dependent upon results of Phase 1 At-risk wildlife species survey should be conducted during active breeding season (early 	
	Environmental Protection Plan	biotenint - Phase 2 - Includes Bend investigation, hampling and testing			spring, but dependent upon weather) - At-risk plant species should occur during growing season (March t September, but dependent upon weathe	
Enumerinanital Permuksing and Meninering	For inwestigative work	 Intensification of documented fisherines resources and adjustic habitats, wildlife and wildlife habitat and species at risk within geptechrikal investigation 	Consultant	Shart Dune Di //02/20113 End Date SO/O6/20112	None	

Archaeological Permitting and Monitoring	For investigative work	Archaeological evenview assessment (AOA) that includes desktop assessment of the project area and undertake preliminary field reconcensance - obtain First Nations Iteritage investigation Pereits - iff aveidance of freitlage sites not possible, obtain Attestion Permit(s) prior to undertaking investigative work	Consultant	Share Date: 01/02/2017 End Date: 00/00/2017	- complete prior to conduction geotechnical investigation activities
Report	Results of studies	Draft Steveston Island Flood Moigation Planning: report Review and Snal approxial	Staff Consultants Council	Skart Date 01/11/2017 End Date 31/01/2018	Staff to review and comment: City Council to finalize and accept
Shaang	Provide report to NDMP	Sarwesson Island Flood Minganion Planning report	Staff Federal Government	Shart Date: 01/02/2013 End Date: 31/02/2018	For sharing of knowledge and best practices in flood planning and mitigation

3) Stakeholder Template

Notes:

- a) Identify all stakeholders/partnerships and describe their current and/or potential level of engagement, as applicable.
- b) Identify those stakeholders/partners who have committed, in-cash or in-kind, support for the proposed project.
- c) Provide a description/summary of the stakeholder list, and how this information provides a rationale/justification for implementing this mitigation activity.

			F	inancial Support	
Name of Stakeholder	Title, Organization	Level of Engagement/Commitment (current and/or potential in the future)	In-Kind Contribution (Name of Items)	Value of In-Kind Contribution (\$)	In-Cash (\$)
	Steveston 20/20		N/A	\$0.00	\$0.00
	Provincial Inspector of Dikes		N/A	\$0.00	\$0.00
	Steveston Harbour Authority		N/A	\$0.00	\$0.00
	Department of Fisheries and Oceans		N/A	\$0.00	\$0.00
	Port Metro Vancouver		N/A	\$0.00	\$0.00
	Provincial Land Tenure Department		N/A	\$0.00	\$0.00
	The City's Advisory Committee for the Environment		N/A	\$0.00	\$0.00
	The City's Heritage Commission		N/A	\$0.00	\$0.00
	The Urban Development Institute		N/A	\$0.00	\$0.0

Key stakeholders generally favoured the creation of a new dike alignment on Steveston Island based on minimizing community disruption and maximizing scope for long-term dike upgrades. The Steveston Island dike alignment is consistent with long term habour improvements proposed by the Steveston Harbour Authority.

ATTACHMENT 3

National Disaster Mitigation Program

Project Proposal Form

A) Applicant Contact Information

i) Province/Territory

Note: If more than one province/territory is involved in this proposed project, please identify the province/territory that will be leading this project.

1) Name:			2) Title:			
Province of British Colum						
3) Organization (i.e. Province/Territory):			4) Telep	4) Telephone Number: 5		5) Facsimile Number:
Emergency Management	BC (EMBC)		(604) 58	6-4390		(604) 586-4334
6) Email Address:	where					7) Date (dd/mm/yyyy):
empchoodprotection@gc	JV,DC.Ca		-	-		
ii) Original Applica	nt(s) (i.e. "the entity/	ies", if applica	able)			
1) Name:			2) Title:			
Denise Tambellini	10.00 XX 20.00 XX 20.		Manage	er Intergovernme	ntal Relat	ions and Protocol Unit
3) Organization:			4) Telep	phone Number:		5) Facsimile Number:
City of Richmond			(604) 27	6-4349		(604) 276-4222
6) Email Address:						7) Date (dd/mm/yyyy):
dtambellini@richmond.ca	1	- 1				30/09/2016
B) Project Details an	d Attestations					
8) Project Stream				Stream 1: R	lisk Asses	ssment(s)
Identify the NDMP Pr	oject Stream relative to	this project sub	mission.	Stream 2: F	lood Mar	poina
note: Each project st	ream has different requi	irements and me		Stroom 2. N	Aitigation	Planning
See Section C for sp	ecifics on each stream.				nugation	
					nvestmer Small Sca	le Structural Mitigation
9) Project Title:						
Steveston Island Flood N	Aitigation Planning					
10) Project Timeline:						
a) Duration of Project:		b) Projected St	art Date	or proposed	c) Proje	cted End Date of proposed
Months:	Years:	project: (dd/	mm/yyyy	/)	proje	ct: (dd/mm/yyyy)
3	1	0	1/01/201	7		31/03/2018
11) Estimated Total Co	st of Project		a) Total of non-federal costs:		\$810,000.00	
(Please complete th	ie Budget Template [Se	ection D]).	b) Total federal costs:		\$810,000.00	
			c) Total Project cost (i.e. a + b): \$1,620,0		\$1,620,000.00	
12) Project Description	1		1	· · · ·		
a) Provide a brief de The Steveston Island studies evaluating va term barrier for pote geotechnical, enviro diking. Please see a	escription of your proposed Flood Mitigation Plannin arious options for flood printial flooding caused by contrained and archaeologic attached Risk Assessment	sed project. Ing is intended to rotection have be climate change ir cal as part of a fe its and engineeri	provide f een comp nduced se easibility le ng report	uture flood prote leted and Steve ea level rise. The evel assessment s for more detail	ection to t ston Islan scope of of Steves s.	he City of Richmond. Previous d has been identified as the long this project is identifying ston Island for the purpose of
Key stud y activities i	nciude:					
Geotechnical Inves Field and Bathyme	stigation (Off-shore and C etric Survey	On-shore Investig	ation Wo	rk)		

Phase 1 and Phase 2 Environmental Site Assessment

b) Describe how this project addresses one or more high risk communities and/or a flood mapping activity.
 Note: b) is not applicable for Stream 1: Risk Assessment(s). Risk Assessments will help identify areas that may be at risk, as well as help to determine the level of risk.

(Please provide your responses in bullet form.)

The City of Richmond is at the forefront of flood protection in the Province of BC as the entire community is contained within the floodplain of the Fraser River, below historic high water levels and subject to freshet events, tidal flood events and internal drainage challenges. Richmond is approximately 1m above mean sea level and protected by 49 km of dike. Climate change scientists estimate that sea level will rise approximately 1 m over the next 100 years. Combined with 0.2 m of subsidence that is expected in that same time period, Richmond will be required to raise and build new dikes to meet future water levels. This project addresses the flood mitigation planning required to make more informed planning decisions for the citizens and businesses that call Richmond home.

Disaster mitigation is essential to protect not only residents, farms and businesses, but municipal, Provincial and Federal infrastructure. On land, this includes Highway 99 which is the main thoroughfare connecting the I5 freeway from Seattle to Vancouver and Vancouver International Airport (YVR). On water, Richmond is along a major shipping route to the port terminals along the Fraser River. Other risks to Richmond include toxic spills along the Fraser River, train and aircraft accidents as Richmond is home to YVR. Partners that may be impacted without disaster mitigation infrastructure from this project include YVR, Transport Canada, BC Ministry of Transportation and Infrastructure and others.

Approximately 220,000 people, \$50 billion worth of assets and over 13,000 businesses that employ 140,000 people call Richmond home. The rapidly growing City Centre has over 4,000 businesses, total commercial space of almost 10 million ft2 and over 30,000 employees. The City Centre population is anticipated to increase by 30,000 residents in the next 10 years. Without this disaster mitigation planning as delivered under the Flood Mitigation Strategy Update, the impact on human lives and Canada's economy that would result from a flood disaster is tremendous and cannot be quantified.

13)

a) H	ow will this project benefit the defined geographica	l area and t	he surrounding	communities?
(F	lease provide your response in bullet-form.)			

-	The existing perimeter diking system was originally constructed t	o the provincial design standards	and levels to wi	ithstand the				
ן ר	25 years to maintain the current level of flood protection and meet provincial standards. Sea level is expected to rise							
2	approximately 1 m over the next 100 years due to climate change. The increasing sea level will increase the probability of							
ir	injundation if Richmond does not improve the height of its dikes in keeping with sea level rise. The Flood Mitigation Strategy							
Ï	Inditional of a result of the field of the f							
_	Climate change science also indicates that storms will become n	nore intense in the coming decade	s. As such, dra	ainage system				
С	apacity must be improved to accommodate the storms of tomor	row. If the pump station capacity p	projects are not	completed.				
fl	ooding from rainfall events will become more common and will ca	ause significantly more property da	mage. The mit	igation				
p	lanning upgrade and subsequent improvement of the City's drair	hage pump stations that are part o	f the Flood Miti	gation				
Ś	trategy Update are critical to the protection of lives, essential for	the maintenance and safeguarding	g of a communi	ity, and				
С	onsistent with the goal and guiding principles of the National Disa	ster Mitigation Strategy.		5				
-	Upgrading the flood protection offered by the perimeter dike gen	erally takes the form of increasing	dike height and	d increasing				
d	ike strength. Improving pumping capacity to deal with water behi	nd the dike from seepage or rainfa	all events is also	o an essential				
р	art of the perimeter dike system. Upgrading 49 kilometres of dik	e cannot be done instantly but get	ting it done as	quickly as				
р	ossible is a priority for the City of Richmond and essential to redu	icing the flood risk in Richmond.						
b) Were surrounding communities informed of this projected pro	oposal? 🛛 🕅 Yes	No					
. C	Comments:							
T	he City of Richmond, Metro Vancouver (including Richmond) and	the Musqueam Indian Band						
1 4) 6	ffeeted Community/ice)							
14) A	mected Community(les)							
۸	<i>lotes:</i> a) Identify all communities that are affected by this proje	ct.						
	b) Indicate the population of all identified communities.							
	c) Indicate if each identified community has been engage	ed in relation to this proposed pro	oject (E); and					
	d) indicate if each identified community has committed to	support this proposed project (
N	lame:	Population:	<u>(E)</u>	(C)				
C	City of Richmond	220,000						
N	lame:	Population:	(E)	(C)				
٨	Aetro Vancouver (including Richmond)	2,464,000						

N1		Deputation	(5)	(C)	
Name:	n Dand		(E)		
Musqueam India	in Band	1,500			
(please provide	your responses in bullet-form)				
a) Reducing imp (i.e. Describe,	bacts of disasters on Canadians? in bullet form, how the proposed mitigation pr <mark>o</mark> jec	t will reduce or negate the impact a	nd/or likelihood	of disasters)	
 1:200 period store 25 years to main approximately 1 inundation if Ric Update which in - Climate chang capacity must b flooding from rain planning upgrade Strategy Update consistent with the boly Reducing disa Building and plan (Richmond). c) Reducing risk There are \$50 b 	 The existing perimeter diking system was originally constructed to the provincial design standards and levels to withstand the 1:200 period storm surge and the 1894 Fraser River flood profile. Significant diking improvements will be required over the next 25 years to maintain the current level of flood protection and meet provincial standards. Sea levels are expected to rise approximately 1 m over the next 100 years due to climate change . The increasing sea levels will increase the probability of inundation if Richmond does not improve the height of its dikes in keeping with sea level rise. The Flood Mitigation Strategy Update which includes the Dike Master Plan Phase 3 and the Flood Management Strategy Update addresses these issues. Climate change science also indicates that storms will become more intense in the coming decades. As such, drainage system capacity must be improved to accommodate the storms of tomorrow. If the pump station capacity projects are not completed, flooding from rainfall events will become more common and will cause significantly more property damage. The mitigation planning upgrade and subsequent improvement of the City's drainage pump stations that are part of the Flood Mitigation Strategy Update are critical to the protection of lives, essential for the maintenance and safeguarding of a community, and consistent with the goal and guiding principles of the National Disaster Mitigation Strategy. b) Reducing disaster related financial liabilities for all levels of government? Building and planning a long-term diking and flood mitigation solution will protect \$50 billion worth of assets on Lulu Island (Richmond). 				
ultimately reduc	e the risk of flood impact on these assets.	planning for a long-term diking and	i fiood mitigatio	n solution will	
16) Prioritized List	of all project proposals in this Project Stream:				
a) Provide your equals the se	prioritized list of all proposed projects (E.g. #1 e econd highest priority, etc.)	equals the highest priority project	, #2		
Number:	Project Title:				
1	Steveston Island Flood Mitigation Planning				
Number:	Project Title:				
2	Flood Mitigation Strategy Update				
b) Indicate the	priority ranking of this proposed project. #:	2			
17) Provide a ratio	ale/justification for implementing this mitigati	on activity instead of the other n	nitigation proje	ects on the	
prioritized proj	ect list. (500 characters max.)		nugution proje		
Richmond's 200	08-2031 Richmond Flood Protection Strategy ider	ntified the need to "Prepare and im	plement a com	prehensive	
dike improveme	nt program." Upgrading 49 kilometres of dike can	not be done instantly but getting it	done as quick	ly as possible	
is a priority for th	ne City of Richmond and essential to reducing the	flood risk in Richmond. The City c	f Richmond ha	s identified	
the Flood Mitiga	tion Strategy as a priority project.				
18) Work Plan:					
The proposed p	project's work plan should clearly articulate all a	ctivities (i.e. tasks, deliverables, r	esources, time	lines, etc.) for	
which the finan	cial contribution is being requested for each fise	al year. In materials, protocols, agreemer	te ote that wi	Il bo croatod	
to support the completion of this proposed project					
Please complete the Work Plan Template (Section D).					
 19) Stakeholders: a) Identify all stakeholders/partnerships and describe their current and/or potential level of engagement, as applicable. b) Identify those stakeholders/partners who have committed support, either in-cash or in-kind, for the proposed project. c) Provide a description/summary of the stakeholder list, and how this information provides a rationale/justification for implementing this mitigation activity. 					
Please provide	your answers in the Stakeholders Template (Se	ection D).			
20) Project Implem	entation Risks (Please provide your response in	n bullet-form):			
	DIA/T	60			

a) Identify any project implementation risks that may impact your ability to deliver the project as planned/scheduled

None.

- b) Outline the mitigation measures that you will take to minimize and/or address your project's implementation risks - Engage a consultant to full-time project manage the scope of the Flood Mitigation Strategy Update
- Hold weekly conference calls between the City and the consultant to ensure targets and major milestones are met
- Hold monthly meetings between the City and consultant to manage performance

21) Monitoring and Performance Management (Please provide your response in bullet-form):

Describe the internal measures that you will implement to monitor your project and manage performance.

- Engage a consultant to full-time project manage the scope of the Flood Mitigation Strategy Update
- Hold weekly conference calls between the City and the consultant to ensure targets and major milestones are met
- Hold monthly meetings between the City and consultant to manage performance

22) Official Languages

In order to support Public Safety Canada's obligations under Part VII of the Official Languages Act, the applicant must indicate whether the needs of official language minority communities were considered, where appropriate (such as for stakeholder engagement activities)

a) Have the needs of official language minority communities been considered?

🛛 Yes 🗌 No

b) What will the (lead) province or territory do to address official languages requirements for linguistic minorities, as per the Official Languages Act, with respect to this project?

All needs and considerations of official language minority communities have been addressed as part of the project's ongoing community stakeholder consultations.

Project Attestations

23) The province or territory responsible for the implementation of this project agrees to share information with the government of Canada, including risk information/data, including the completed risk assessment information template flood maps and associated data, based on the criteria established by PS, for inclusion in a national flood database; an all other relevant project information, such as lessons learned.
X I agree
24) The province or territory responsible for the implementation of this project agrees to report, in accordance with its contribution agreement, on topics such as the project implementation status, measures for successful implementation project risk mitigation measures, and financial expenditures. X I agree
 25) The province or territory responsible for the implementation of this project agrees to publicly recognize the federal government's contribution in any announcement
X I agree
26) The province or territory responsible for the implementation of this project agrees to ensure that it takes all necessary steps to prevent the risk of conflicts of interest, including:
 Disclosure of any apparent, actual or potential conflict of interest in compliance with Canada or the Province's laws, regulations or policies, as the case may be, and disclosure of the involvement of any former public servants or public office holders subject to the Values and Ethics Code for the Public Sector, the Conflict of Interest Act, and the condition of the Parliament of Canada Act;
 Registrant as lobbyists as required under the Lobbying Act (applicants shall provide assurance that, where lobbyists are utilized, they are registered in accordance with the Lobbying Act and that no actual or potential conflict of interest exists nor any contingency fee arrangement);
 Role of any Government of Canada official, if a Government of Canada official is to participate on an advisory committe or board. Such involvement must not be seen to be exercising control on the committee or board on the use of funds.
🔀 I agree
 27) NDMP contributions may be provided for the following types of mitigation projects: a) new projects or existing projects that have been developed but have not been identified for funding; and b) non-structural or small scale structural projects.
Does your proposed NDMP meet this description?

C) Additional Required Information for Each NDMP Stream (1-4)

Stream 3: Mitigation Planning		
 Was a copy of your completed and up- geographic area related to this propos 	to-date NDMP risk assessme ed project provided to PS?	ent information template (RAIT) covering the
Yes, Previously - File #:	Yes, Attached	No
2) Description/Summary of your risk asse (500 characters max.)	ssment findings.	
Flood Risk Economic Assessments con for the City. Upgrading 49 kilometres to in alignment with current sea level rise p project.	ducted for the City indicates a c accommodate for climate chan redictions. The City of Richmon	clear need to improve the perimeter ring dike protections tige sea level rise will be performed over the next 25 years and has identified the Flood Mitigation Strategy as a priority
3)		
a) Copy(ies) of the valid flood map(s) c	overing the geographic area re	elated to this proposed project.
Was a copy of all valid/current maps p	rovided?	
Yes, Previously - File #:	Yes, Attached	No
b) Description/Summary		
Provide a description/summary of you Richmond's primary line of defense aga As the elevation of Lulu Island is genera events. The estimated economic damage	r valid/current map(s). inst flooding during freshet ever ly below high water , the area w je from an event similar to the 1	nts or tidal surges is the existing perimeter diking system. vould be flooded without this system during extreme 894 Fraser River flood is \$7.1 billion.
4) Describe how the information in your r	isk assessment(s) and flood n	nap(s) provide(s) a rationale/justification for
completing this mitigation activity.		
Flooding is a primary risk for the City of program. Approximately 220,000 peop flood protection system and the Flood N	t response to climate change in Richmond and maintaining a hig le, \$50 billion in assets, and a h ⁄litigation Strategy Update is ne	duced sea level rise and increasing rainfall intensity. gh level of flood protection is the primary goal of this igh value of economic activity are protected by the City's cessary for mitigation.
5) Project Output Attestation:		
a) All Stream 3 projects must produce completion.	a comprehensive mitigation pl	lan and provide it to Public Safety Canada upon
being undertaken.	ble guidelines, standards and/	or metriodologies of the province/territory in which it is
I agree		

D) Templates

1. Budget Template

Add Template

Remove Template

Project Budget Revenues for Fiscal Year (April 1 - March 31) 2017 - 2018

Project Title: Flood Mitigation Strategy Update

Government Funding: Cash (Municipal, provincial, territorial, and federal) (Note: For foderal, funding, please specify the federal government department)	Amount
City of Dishmond	\$350,000,00
	\$230,000.00
Federal Government	\$250,000.00
Subtotal – Cash	\$500,000.00
Government Funding: In-Kind (Municipal, provincial, territorial, and federal) (Note: For federal funding, please specify the federal government department)	Amount
Subtotal – In-Kind	\$0.00
Total Government Funding (subtotal of Cash + subtotal of In-Kind from municipal, provincial, territorial, and federal government sources)	\$500,000.00
Total <u>Federal Government</u> Funding (subtotal of Cash + subtotal of In-Kind from all federal government sources)	\$250,000.00
Proportion of Federal Government Contribution (Note: The maximum Federal Contribution is 50% for Provinces and 75% for Territories)	<u>50</u> %
Non-government Funding and other: Cash	Amount
Subtotal – Cash	\$0.00
Non-government Funding and other: In-Kind	Amount
Subtotal – In-Kind	\$0.00
Total Non-government Funding and other (subtotal of Cash + subtotal of In-Kind from non-government funding and other sources)	\$0.00
Total Government Funding (Total of <u>government funding</u> + total of <u>non-government funding and other</u>)	\$500,000.00

Cash: actual dollar value or revenues/funding received
 In-Kind: non-cash input which is given a cash value.

Project Budget Eligible Expenses for Fiscal Year (April 1 - March 31) 2017 ⁻ 2018

Project Title: Flood Mitigation Strategy Update

		Eligible Expenditures: Cash			
Eligible Costs (i.e. Categories of work)	Details	Public Safety Canada Funding (NDMP Funds)	Other Government Funding	Non- Government Funding and Other	Total
Consultant Fees	Dike Master Plan Phase 3	\$100,000.00	\$100,000.00		\$200,000.00
Consultant Fees	Pump Station Condition Assessment Update	\$75,000.00	\$75,000.00		\$150,000.00
Consultant Fees	Flood Management Strategy Update	\$72,500.00	\$72,500.0 0		\$145,000.00
Professional Services Support	Building a business case	\$2,500.00	\$2,500.0 0		\$5,000.00
Subtotal – Cash		\$250,0 0 0.00	\$250,000.00	\$0.00	\$500,000.00
		Eligible Expenditures: In-Kind			
Eligible Costs (i.e. Categories of work)	Details	Public Safety Canada Funding (NDMP Funds)	Other Government Funding	Non- Government Funding and Other	Total
					\$0.00
Subtotal – In-Kind		\$0.00	\$0.00	\$0.00	\$0.00
Total Expenditures: (Subtotal of Cash + subtotal of In-Kind)		\$250,000.00	\$250,000.00	\$0.00	\$500,000.00

1) Cash: actual dollar value or revenues/funding received

2) In-Kind: non-cash input which is given a cash value.

List: Eligible Costs

#	Eligible Costs		
1	New research and data collection.		
2	Flood mapping and forecasting.		
3	Flood resistant construction techniques.		
4	Hazard mapping and forecasting.		
5	Professional services support		
6	Purchase of equipment used to undertake mitigation and/or support the implementation of permanent structural mitigation measures		
7	Building community partnerships for the purpose of disaster risk reduction.		
8	Consultant fees.		
9	Hazard, impact, risk, vulnerability and assessments.		
10	Development of disaster mitigation plans.		
11	Public awareness and education.		
12	Building standards and enforcement.		
13	Non-structural retrofitting.		
14	Land use planning controls.		
15	Planning and feasibility activities for structural mitigation investments		
16	Land purchases		
17	Non-structural measures that will enhance proactive whole-of-community flood mitigation measures and resilience to associated hazards and risks		
18	Small-scale structural flood mitigation measures		
19	Construction of new permanent structural measures designated to mitigate the impacts of flooding		
20	Improvement or modernization of existing permanent structural measures.		
21	Post-flood finishing costs for measures undertaken within the eligible period.		
22	Measures taken to protect primary residences only.		
23	Other permanent structural flood mitigation measures and costs related to post-flood finishing measures		
24	Exceptional salary costs, benefits and incidentals.		
25	Exceptional administrative costs.		
26	Materials.		
27	Facilities.		
28	Exceptional transportation costs.		
29	Other incurred costs that are directly attributed to the implementation of permanent structural and non- structural flood mitigation measures.		

List: Ineligible Costs

#	Ineligible Costs
1	Costs relating to events and equipment which are considered to be the routine responsibility of provincial ministries or first responder agencies such as police, fire and ambulance.
2	Ongoing operating and maintenance costs for NDMP initiatives following completion of the project.
3	The value assigned to data that was procured or collected prior to the establishment of the project Contribution Agreement.
4	Administrative costs which are not directly related to a specific NDMP project. Each recipient is expected to absorb the routine costs of doing business. Examples such as regular salaries and benefits, audit costs, office furniture, equipment, office supplies, committee work, administration and supervision of NDMP, are not to be cost-shared. It is recognized that certain proposals incur extraordinary administrative expenses, which are incremental to the routine costs of providing government services; these expenses can be considered for cost-sharing and shall be clearly identified in detail at the proposal stage.
5	Hospitality costs.
6	Mitigation project that would yield only temporary measures (e.g., use of sandbags).
7	Mitigation projects that would create ongoing need for funds from the federal government or from its recipient that cannot be absorbed in their current budget.
8	Any expenditures related to a project already started prior to application for funding and prior to approval.
9	Any expenditures related to a project already started prior toDamages and interests resulting from any action or omission causing harm to a third party for which the Recipient is held civilly liable by a Court and has to pay; or fines under any municipal, provincial, territorial or federal legislation resulting from a transgression by the Recipient, or any amount resulting from any settlement entered into by the Recipient, or imposed by a Court, including an Arbiter, to the Recipient in relation with the funded NDMP project. application for funding and prior to approval.
10	Taxes other than the PST or provincial part of the HST.
11	Projects that address needs that are not related to prevention/mitigation.
12	Costs reimbursed under another Government of Canada program.

2) Work Plan Template

Activities	Tasks	Definierable(s)/ Product(s)	Resources	Timelines (Start and End Dates)	Considerations/ Comments	
Rot IP for Hood Draft and Meiganion RFPs for	Draft and release RFPs for each	AV PS	Staff	Start Date: 01/01/2017	Staff will be pre-draft RFPs for public tenders	
Updaee	Plan Phase 3, Pump Station Condition Assessment Update, and Flood Management Strategy Update			End Geog X1//01/20153		
Ref P Award Submission review		Awarded contract based on response	Staff	Start Data: 31/01/2017	Assumes funding approvals in place	
1996		to grataic, bendiens.		2/4/2017		
Dike Master Plan Phase 3:	Respective studies. for Flood Mitigetion	Staff Consultants	Start Data 01/03/2017	Niome		
	Flood Management Strategy Update Strategy Update; and Pump Station Condition Assessment Update		Trid Deta 31/10/2017			
Report R	Results of studies	Draft Flood Mitigesion Seasegy Update report review and final appreval	Staff Consultants Council	Start Date 01/11/2017	Staff to review and comment; City Council to finalize and accept	
				Krid Date: 31/01/2018		
Sharing	Provide report to NDMP	Rood Minigation Strategy Update report	Staff Federal Government	Toes Date 01/02/2018	For sharing of knowledge and best practices in	
				End Calle 31/03/2016	mbigation	

3) Stakeholder Template

Notes:

- a) Identify all stakeholders/partnerships and describe their current and/or potential level of engagement, as applicable.
- b) Identify those stakeholders/partners who have committed, in-cash or in-kind, support for the proposed project.
- c) Provide a description/summary of the stakeholder list, and how this information provides a rationale/justification for implementing this mitigation activity.

	Title, Organization	Level of Engagement/Commitment (current and/or potential in the future)	Financial Support			
Name of Stakeholder			In-Kind Contribution (Name of Items)	Value of In-Kind Contribution (\$)	In-Cash (\$)	
City of Richmond	City of Richmond		N/A	\$0.00	\$250,000.00	
Metro Vancouver	Metro Vancouver		N/A	\$0.00	\$0.00	
Musqueam Indian Band	Musqueam Indian Band		N/A	\$0,00	\$0.00	

Part 2: Description/Summary

How does the engagement of these stakeholders support and/or justify the implementation of this mitigation activity?

Approximately 220,000 people and over 13,000 businesses that employ 140,000 people call Richmond home. The rapidly growing City Centre has over 4,000 businesses, total commercial space of almost 10 million ft2 and over 30,000 employees. The City Centre population is anticipated to increase by 30,000 residents in the next 10 years. Without this disaster mitigation planning as delivered under the Flood Mitigation Strategy Update, the impact on human lives and Canada's economy that would result from a flood disaster is tremendous and cannot be quantified.



Re:	Proposed Amendments to Traffic Bylaw No. 5870		
From:	Victor Wei, P. Eng. Director, Transportation	File:	10-6450-00/Vol 01
То:	Public Works and Transportation Committee	Date:	October 3, 2016

Staff Recommendation

- 1. That Traffic Bylaw No. 5870, Amendment Bylaw No. 9539 be introduced and given first, second and third reading;
- 2. That Municipal Ticket Information Authorization Bylaw No.7321, Amendment Bylaw No. 9550 be introduced and given first, second and third reading; and
- 3. That Notice of Bylaw Violation Dispute Adjudication Bylaw No.8122, Amendment Bylaw No.9554 be introduced and given first, second and third reading.

e. 2

Victor Wei, P. Eng. Director, Transportation (604-276-4131)

Att. 3

REPORT CONCURRENCE					
ROUTED TO:	CONCURRENCE	CONCURRENCE OF GENERAL MANAGER			
Community Bylaws Fire Rescue Law RCMP	র হ হ	the Erces			
REVIEWED BY STAFF REPORT / AGENDA REVIEW SUBCOMMITTEE		APPROVED BA CAO			

Staff Report

Origin

Staff have recently completed a comprehensive review of Richmond Traffic Bylaw No. 5870 which was enacted in 1992 to regulate traffic, road users, parking and other elements such as sightline obstruction from overgrown vegetation at adjacent properties abutting public roadways in order to ensure safety and functional integrity of the public realm. As the Bylaw was last reviewed and amended in 2012, this report presents the recommended amendments, along with the rationale, to bring it up-to-date and to conform to current practices and requirements.

This report supports Council's 2014-2018 Term Goal #1 A Safe Community:

- 1.1. Policy and service models that reflect Richmond-specific needs.
- *1.2. Program and service enhancements that improve community safety services in the City.*

Analysis

The proposed amendments to Traffic Bylaw No. 5870 address the need for:

- updating existing outdated clauses to reflect today's and future conditions;
- providing new regulations to enhance traffic safety, especially for pedestrians; and
- streamlining the bylaw language for simplicity and clarity.

The amendments reflect the outcome of consultation with Richmond RCMP Traffic Section and the Community Bylaws Department regarding the required associated changes to:

- Municipal Ticket Information Authorization Bylaw No. 7321;
- Notice of Bylaw Violation Dispute Adjudication Bylaw No. 8122; and

to ensure consistency with and support of the updated Traffic Bylaw.

Staff also researched traffic bylaws in other Metro Vancouver municipalities for language and intent to enhance consistency amongst the bylaws.

Based on the above objectives and research work, staff are recommending the following amendments and deletions.

Proposed Amendments to Traffic Bylaw No. 5870

The proposed changes to the Traffic Bylaw include the following.

• <u>Motorcycle, Moped and Bicycle Parking</u>: Incorporation of the recommendations included in the staff report titled "On Street Motorcycle and Moped Parking," which was adopted by Council on March 29, 2016 to enable creation of dedicated on-street parking spots for lower emission vehicles in the City Centre Parking Management Zone and Steveston Business

PWT - 72
October 3, 2016

District. The bicycle parking zones would have bicycle racks, road markings and associated signage installed as "Bicycle Parking Only". The creation of on street bicycle parking stalls would be a further proactive step toward reducing the number of automobile trips and greenhouse gas (GHG) emissions.

- Jaywalking: Jaywalking is becoming an ever increasing safety concern with pedestrians crossing major arterial roadways at locations other than at a crosswalk. In fact, a notable portion of recent pedestrian fatalities in Richmond occurred away from crosswalks. Statistics provided by the RCMP Traffic Section indicate that in the last five years there have been 14 fatal pedestrian collisions, of which eight occurred at intersections, four outside of a crosswalk and the remaining one at mid-block. The definition of a crosswalk and amended regulations of where pedestrians should cross a City arterial roadway would be added to Section 30 (Crosswalks) to address jaywalking. As the definition of jaywalking has been removed from the Provincial Motor Vehicle Act, this amendment would allow Richmond RCMP to conduct enforcement and, more importantly, increase public awareness of the potential severe consequences of pedestrians randomly stepping out into arterial roadways at mid-block. The fine proposed in the amendments to the Municipal Ticket Information Bylaw No. 7321 for Jaywalking is \$50.00; this figure was determined upon discussion with the RCMP Traffic Section. The fine is designed to act as a deterrent without being overly punitive. This amendment will be enforced by the RCMP, who currently have 13 members in the Traffic Section for enforcement. There are no current specific target locations for pedestrian enforcement as the locations of the collisions are spread across the city.
- <u>Yield when Crosswalk Occupied</u>: To complement the proposed jaywalking regulation, a further amendment in the above-noted Section 30 would be the addition that motorists must yield to pedestrians in a crosswalk. As pedestrians would be encouraged to use designated crosswalks as a result of the new jaywalking regulation, it is necessary to ensure maximum compliance by motorists on yielding to pedestrians at crosswalks. While the provincial *Motor Vehicle Act* includes a regulation addressing this issue, the fine is only \$109.00. The proposed fine in this amendment would be \$150.00 to reflect the City's increased emphasis on pedestrian safety. This amendment will also be enforced by the RCMP, particularly in the City Centre where there is a higher level of pedestrian activity.
- <u>Crossing when not Permitted</u>: A further amendment to Section 30 would address pedestrians crossing a roadway in contravention of a traffic control device (i.e., pedestrians stepping off the curb to cross after the "Don't Walk" signal is on). This undesirable and unsafe pedestrian behaviour creates conflicts with motorists who have observed the pedestrian signal showing "Don't Walk" and then proceed with a turning movement across the crosswalk. The proposed amendment would allow RCMP to conduct targeted enforcement, particularly in the City Centre. The proposed fine for crossing in contravention of a traffic control device will be \$50.00. Again, the fine is designed to act as a deterrent without being punitive.
- <u>Visibility Clearance at Intersections</u>: A new Schedule L in accordance with Policy 7008 Sightline Investigation and Enforcement Policy would include processes to address sightline concerns at uncontrolled intersections, intersections controlled by a stop sign and intersections where there has been new construction or new landscaping or plantings. The

different procedures based on site conditions would allow staff to apply the appropriate methodology out of several to address sightline concerns rather than the current single methodology. Policy 7008 – Sightline Investigation and Enforcement Policy will now form part of Bylaw No. 5870 as the original Sightline Bylaw 4820 was repealed.

- <u>Placement of Temporary Storage Containers</u>: Over the past years, staff have been receiving a continually increasing number of requests for the placement of temporary moving and storage bins on City roadways or boulevards. A new Section 9A would regulate the placement of these containers and provide an application form and conditions for placement. The proposed fee for the placement of a temporary moving bin on a City roadway or boulevard is \$30 per day in order to recover administrative costs of the City. This is consistent with the currently daily rate charged for a Construction Loading Zone.
- <u>Consolidation of Schedules</u>: Schedules K (City Centre Parking Management Zone), L (Block Meter Zones) and M (Parking Permit Zones) attached to the bylaw have been combined for improved clarity.

Proposed Amendments to Municipal Ticket Information Authorization Bylaw No. 7321

Based on the proposed changes to the Traffic Bylaw No. 5870 regarding fines for bylaw violations as described above, amendments are required to Municipal Ticket Information Authorization Bylaw No. 7321 to add the new bylaw violations and fine amounts for jaywalking, crossing in contravention of a traffic control device and failure to yield when a crosswalk is occupied.

Proposed Amendments to Notice of Bylaw Violation Dispute Adjudication Bylaw No. 8122

Similarly, based on the proposed changes to Municipal Ticket Information Authorization Bylaw No. 7321 and Commercial Vehicle Licensing Bylaw No. 4176 amendments are required to Bylaw Violation Dispute Adjudication Bylaw No. 8122 to add the new bylaw contraventions and fine amounts.

Financial Impact

While there may be an initial increase in ticketing revenue following adoption of the bylaw amendments, it is anticipated that the amount of tickets issued will level off once road users become familiar with the new traffic and parking regulations.

It is estimated that approximately \$1,000 per year in new revenue would be generated from the permit fee imposed on the temporary placement of moving and storage bins on City roadways. If approved by Council, this favourable financial impact will be reflected in the 2017 Operating Budget for Council's consideration.

Conclusion

The proposed bylaw amendments would update existing traffic and parking regulations to reflect present and future trends of community needs and roadway environment as well as support City

October 3, 2016

objectives with respect to enhancing traffic safety particularly for pedestrians. In addition customer service will be improved with the permitting of temporary placement of storage bins on City roadways in response to customer requests.

 $\langle a \rangle$

Kolert GilchristTraffic Supervisor(604-247-4697)

RG:lce

- Att. 1: Traffic Bylaw No. 5870, Amendment Bylaw No. 9539
- Att. 2: Municipal Ticket Information Authorization Bylaw No. 7321, Amendment Bylaw No. 9550
- Att. 3: Notice of Bylaw Violation Dispute Adjudication Bylaw No. 8122, Amendment Bylaw No. 9554



Traffic Bylaw No. 5870 Amendment Bylaw No. 9539

The Council of the City of Richmond enacts as follows:

1. Traffic Bylaw No. 5870, as amended, is further amended at Section 1.2 by deleting:

(a) the definition of "Bylaw Enforcement Officer" and replacing it with the following:

"Bylaw Enforcement Officer means an employee of the City of Richmond, appointed to the job position or title of bylaw enforcement officer, or acting in another capacity, on behalf of the City for the purpose of the enforcement of one or more of the City bylaws.";

(b) the definition of "Commercial Vehicle" and replacing it with the following:

"Commercial Vehicle

means a **vehicle** used for the transportation of persons, freight or for artisan use that is:

- (a) a truck or tractor with a licensed gross vehicle weight of 5,500 Kg or greater; or
- (b) a truck or tractor with a maximum height in excess of 2.25 meters; or
- (c) a vehicle with a seating capacity greater than nine persons; or
- (d) a vehicle as defined in the Commercial Vehicle Licensing Bylaw No.4716

(c) the definition of "Park/Parked/Parking" and replacing it with the following:

"Park/Parked/Parking

means the **standing** of a **vehicle**, whether occupied or not, other than for the purpose of and while actually engaged in, loading or unloading of property, goods, or the discharge or taking on of passengers, or in compliance with the directions of:

- (a) a **police officer**, a **bylaw enforcement officer**, or a person contracted by the **City** for traffic regulation purposes, or
- (b) a traffic control device.".

2. Traffic Bylaw No.5870, as amended, is further amended at Section 1.2 by adding:

(a) the following definition after the definition of "Centre Median":

"Chattel means personal items, objects, material, fill, refuse, equipment or machinery.";

(b) the following definitions after the definition of "Construction Zone":

"Container

means a receptacle, without a motive power unit, designed for moving or storing property, which must be loaded or unloaded by means of a winch, lift, tilt deck or rails, not to exceed 2.6 meters in width nor 6.0 meters in length.

Corner Clearance Parking m

means an area on a **street** adjacent to the **curb** located between a **crosswalk** and the nearest legal parking space not signed for **motorcycle**, **moped** or bicycle parking, and that the **General Manager**, **Engineering & Public Works** had marked by **traffic control device**(s) for corner clearance **motorcycle**, **moped** and/or bicycle parking.

Crosswalk

means the portion of a **street** indicated for pedestrian crossing by lines or other markings, and at **intersections** means the portion of the **street** between the extension of the lateral edge of the **street** and the adjacent property line, but does not include **lane intersections**.";

(c) the following definition after the definition of "Idle/Idling":

"Intersection means the area created by the extension of the lateral lines of streets which join one another, whether such streets at the junction cross each other or meet at an angle without crossing each other.

Jaywalk

means to cross a Major or Minor Arterial Road at any place except:

- (a) at the **intersection** of two **streets**, whether controlled by a **traffic control device** or not;
- (b) within a **crosswalk** at an **intersection**, whether controlled by a **traffic control device** or not; or
- (c) within any other crosswalk, whether controlled by a traffic control device or not.";

(d) the following definition after the definition of "Loading Zone":

"Major or Minor Arterial Road means any road identified as Major Arterial or Minor Arterial on the Road Classification Map forming part

of Part 8 of Schedule 1 of the City's Official Community Plan, Bylaw 9000.";

(e) the following definitions after the definition of "Mobile Workshop":

"Moped means a low powered motorcycle that relies on a small conventional gas powered motor (50 cc or less) or a small electric motor (1500 W or less) capable of travel up to 70 Km/h, which is registered, licensed and insured.

Motorcycle means a two wheeled self-propelled gasoline engine **vehicle** or scooter or a two wheeled **vehicle** powered by an electric motor, which is registered, licensed and insured.";

(f) the following definition after the definition of "Permit Zone":

"Place/Placed/Placing means to stop or stand a container or chattel on a street or boulevard for more than 30 minutes.";

(g) the following definition after the definition of "Public Utility Corporation":

"Recreation Vehicle	means a vehicle designed to provide temporary living accommodation for travel, vacation or recreational use, and designed to be driven, towed or transported."; and			
(h) the following defin	ition after the definition of "Street":			
"Taxi	means a vehicle used for the carrying, transportation or conveyance of passengers that with its driver is operated for hire, but does not include limousines or tour buses .			
Taxi Zone	means an area on any street adjacent to the curb designated for a maximum of three minutes for the stopping of taxis to facilitate the loading and unloading of passengers only.			
Time Period	means the amount of time purchased through a block meter machine as indicated by a purchase time and date and an expiration time and date.			
Tour Bus	means a bus for hire, not operated by TransLink, its designate or successor, used to operate tours to various locations in the City .			
Tour Bus Zone	means an area on any street adjacent to the curb , or edge of the street , designated for a maximum of 15 minutes for the stopping of tour buses to facilitate the loading and unloading of passengers only.".			

- (3) **Traffic Bylaw No. 5870**, as amended, is further amended at Section 5 "[Visibility Clearance at Intersections]" by replacing the existing paragraph 5.1 with the following:
 - "5.1 Visibility clearance at intersections will be in accordance with Schedule L (Policy 7008 – Sight Line Investigation and Enforcement) which is attached and forms part of this Bylaw.".
- (3) **Traffic Bylaw No. 5870**, as amended, is further amended by adding the following as a new section between Section 9 and 10:

"9A CONTAINERS

- 9A.1 No person shall deliberately or accidentally **place**, permit or cause to be **placed** a **container** or **chattel** on a **street** or **boulevard**, unless a temporary placement permit therefore has been issued pursuant to this Section 9A by the **General Manager**, **Engineering & Public Works**.
- 9A.2 Any owner or operator of a container, who desires a temporary placement permit required pursuant to subsection 9 A.1 above shall make an application in writing for such permit to the General Manager, Engineering & Public Works and shall provide such particulars therein, as the General Manager, Engineering & Public Works may require.
- 9A.3 The temporary placement permits for **containers** shall be in a form attached as Schedule M to this Bylaw and shall only be issued upon the applicant having satisfied the following conditions:
 - (a) the application form provided by the **City** being fully complete;
 - (b) if the container is to be placed on a street or boulevard adjacent to a residence for use by the owners or occupants of said residence, the General Manager, Engineering & Public Works is satisfied that there is no practical location on the residences property to place the container; and
 - (c) fees, in the amount of \$30 per day plus applicable taxes, being fully paid. The General Manager, Engineering & Public Works is hereby authorized to increase this fee annually effective January 1st of each year by an amount equal to the previous year's Consumer Price Index for Greater Vancouver and rounded to the nearest \$0.10.
- 9A.4 The General Manager, Engineering & Public Works may grant a temporary placement permit not to exceed:
 (a) forty eight (48) hours in duration if only inclusive of huginees days

(a) forty-eight (48) hours in duration if only inclusive of business days;

- (b) seventy-two (72) hours in duration if inclusive of a Saturday or Sunday; or
- (c) ninety-six (96) hours in duration if inclusive of a Saturday or Sunday, and a Statutory Holiday,

authorizing the placement of a **container** on a **street** or **boulevard** for the purpose of loading, unloading or storing **chattel**.

- 9A.5 The owner or operator of any **container**, for which a temporary placement permit has been issued pursuant to this Section 9A shall at all times be subject to the conditions stated therein, and shall display such permit on the permitted **container**.
- 9A.6 The owner or operator of any **container**, for which a temporary placement permit has been issued pursuant to this Section 9A, must abide by all the terms and conditions of such permit.
- 9A.7 Any temporary placement permit issued pursuant to this Section 9A shall be subject to immediate cancellation without notice, in the event of any condition of the said permit being violated or in the event of false information being given by the applicant.
- 9A.8 Any owner or operator of a **container** who places a **container** on a **street** or **boulevard** without displaying a valid temporary placement permit issued pursuant to this Section 9A, or who has obtained a temporary placement permit by submitting incomplete, inaccurate or erroneous information, or who fails to abide by all terms and conditions of the temporary placement permit for their **container**, shall be guilty of an offence.
- 9A.9 The General Manager, Engineering & Public Works may detain, seize, cause to be removed or impound a container and /or chattel found to be placed on a street or boulevard without a temporary placement permit issued pursuant to this Section 9A without notice to the owner and/or operator thereof."
- (5) **Traffic Bylaw No. 5870**, as amended, is amended further at Section 12 by replacing subsections 12.3 (c) and 12.3 (k) with the following:
 - "(c) within 6.0 meters (19.69 feet) of the property line of any intersecting street, excepting lanes, and excepting that persons may stop or stand a motorcycle, moped or bicycle within parking spaces signed and marked as corner clearance parking.
 - (k) within 6.0 meters (19.69 feet) of either side of a **crosswalk**, excepting that persons may **stop** or **stand** a **motorcycle**, **moped** or bicycle within parking spaces

signed and marked for the parking of **motorcycles**, **mopeds** or bicycles located within such 6.0 meters.".

- (6) **Traffic Bylaw No. 5870**, as amended, is amended further at Section 12 by replacing subsection 12.4 (d) with the following:
 - "(d) at any one place on any street for a period longer than 72 consecutive hours";
- (7) **Traffic Bylaw No. 5870**, as amended, is amended further at Section 12 by adding subsections 12.4 (v) ,12.4 (w) and 12.4(x) with the following:
 - "(v) other than a **taxi**, in a **taxi zone**;
 - (w) which is a recreational vehicle on any street between the hours of 8:00 p.m. and
 6:00 a.m for the purposes of living in, sleeping in, or occupying such recreational vehicle; and
 - (x) other than a tour bus, in a tour bus zone.".
- (8) **Traffic Bylaw No. 5870**, as amended, is amended further at Section 12A deleting subsection 12.A.1 and replacing it with the following:
 - "12A.1 Certain areas contained within the City Centre Parking Management Zone as shown shaded on Schedule K, which is attached and forms part of this Bylaw, are designated as **block meter zones** shown outlined in a dashed line on Schedule K of this Bylaw."
- (9) **Traffic Bylaw No. 5870**, as amended, is amended further at Section 12A by replacing subsection 12A.2(a) with the following:

"12A.2 A person may only park a vehicle in a **block meter zone** if:

- (i) a time period has been selected and payment has been accepted by the block meter machine and a parking receipt has been obtained from the block meter machine and placed face up inside the windshield of the vehicle, with the amount paid, time and date of purchase and time and date of expiration clearly visible from outside the vehicle and the purchased time period, as indicated on the parking receipt, remains valid; or
- (10) **Traffic Bylaw No. 5870**, as amended, is amended further at Section 12B by replacing subsections 12B.1 and 12B.2 and 12B.3 with the following:
 - "12B.1 Certain areas contained within the City Centre Parking Management Zone, as shown shaded on Schedule K of this Bylaw, are designated as **permit zones** as shown outlined in a dashed line on Schedule K of this Bylaw;

- 12B.2 The Manager, Community Bylaws is authorized to issue parking permits for permit zones authorizing parking between the hours of 6:00 a.m. to 9:00 p.m. daily.
- 12B.3 A **parking permit** issued under subsection 12B.2 is valid for **parking** within the portion of the **street** designated by a **traffic control device** for permit parking.".
- (11) **Traffic Bylaw No. 5870**, as amended, is amended further at Section 12B by replacing subsection 12B.2 with the following:
 - "12B.2 The Manager, Community Bylaws is authorized:
 - (a) to issue **parking permits** or **permit decals** under such conditions as considered necessary for the proper and orderly administration of **parking**;
 - (b) to revoke or reinstate **parking permits** or **permit decals** issued under this Part 12.B of this Bylaw."
- (12) **Traffic Bylaw No. 5870**, as amended, is amended further at Section 12B by adding after subsection 12B.7 the following as new subsections 12B.8 and 12B.9:
 - "12B.8 A person to whom a **parking permit** has been issued must comply with any conditions established for that **parking permit**, and:
 - (a) where the **parking permit** is in the form of an identification card, attach such card to the rear-view mirror of the **vehicle**; or
 - (b) where the **parking permit** is in the form of a decal, prominently display such decal on the dash or front windshield of the **vehicle**.
 - 12B.9 The **City** will not issue refunds for any fees paid to the **City** in respect of **parking permits**."
- (13) **Traffic Bylaw No. 5870**, as amended, is amended further at Section 30 by replacing subsection 30.1 with the following:

"30.1 Pedestrians shall not jaywalk.".

- (14) **Traffic Bylaw No. 5870**, as amended, is amended further at Section 30 by adding after subsection 30.2 the following new subsections 30.3 and 30.4:
 - "30.3 Pedestrians shall not cross, nor attempt to cross a street in any crosswalk in contravention of a traffic control device.

- 30.4 Drivers of **vehicles** must stop at a **crosswalk** when a pedestrian is crossing the **street** in a **crosswalk** and the pedestrian is on the half of the **street** on which the **vehicle** is travelling.".
- (15) **Traffic Bylaw No. 5870**, as amended, is amended further at Section 37 by replacing subsection 37.1 with the following:
 - "37.1 Schedules "A", "B", "C", "D", "E", "F", "G", "H", "J", "K", "L "and "M" attached hereto shall form an integral part of this Bylaw."
- (16) **Traffic Bylaw No. 5870**, as amended, is amended further by replacing Schedule B with Schedule A attached hereto as a new Schedule B to Bylaw No. 5870.
- (17) **Traffic Bylaw No. 5870**, as amended, is amended further by deleting Schedule K and replacing it with Schedule B attached hereto as the new Schedule K to Bylaw No. 5870.
- (18) **Traffic Bylaw No. 5870**, as amended, is amended further by deleting Schedule L and replacing it with Schedule C attached hereto as the new Schedule L to Bylaw No. 5870.
- (19) **Traffic Bylaw No. 5870**, as amended, is amended further by deleting Schedule M and replacing it with Schedule D attached hereto as the new Schedule M to Bylaw No. 5870.
- (20) This Bylaw is cited as "Traffic Bylaw No. 5870, Amendment Bylaw No. 9539".

FIRST READING

SECOND READING

THIRD READING

ADOPTED

APPROVED for content by originating dept. APPROVED for legality by Solicitor MA

CITY OF RICHMOND

MAYOR

CORPORATE OFFICER

SCHEDULE A to AMENDMENT BYLAW NO. 9539

SCHEDULE B to BYLAW NO. 5870

SPEED ZONES

Highways On Which Traffic Is Limited To 30 Kilometres (18.64 Miles) Per Hour

- 1. River Road between No. 7 Road and a point one half mile east of the centre line of Nelson Road and measured at right angles to the said Nelson Road.
- 2. River Road from a point 198 metres (649.61 feet) east of the northerly projection of the centre line of Queen Road, measured at right angles to the said northerly projection of Queen Road, to Boundary Road.
- 3. Finn Road and No. 4 Road, from a point 244 metres (800.52 feet) east of the intersection of Garden City Road to the junction of No. 4 Road, from this point north on No. 4 Road to 30.5 metres (100.06 feet) north of the bridge over Green Slough.
- 4. Dyke Road from Boundary Road to Hamilton Road.
- 5. Ryan Road from the west boundary line of Lot 137, Section 33, Block 4 North, Range 6 West, being the South Arm Park to a point 15 metres (49.21 feet) north of the north boundary line of Ryan Place.
- 6. All roads within the Burkeville area subdivision bounded by the south property line of Miller Road, the west property line of Russ Baker Way, and the Vancouver International Airport on the west.
- 7. All roads within the Steveston Village Core bounded by the north property line of Chatham Street, the west property line of No.1 Road, the south property line of Bayview Street and the west property line of Third Avenue.
- 8. Chatham Street from Third Avenue to Seventh Avenue.

SCHEDULE B to AMENDMENT BYLAW NO. 9539

SCHEDULE K to BYLAW NO. 5870

CITY CENTRE PARKING MANAGEMENT ZONE



SCHEDULE C to AMENDMENT BYLAW NO. 9539

SCHEDULE L to BYLAW NO.5870

SIGHTLINE INVESTIGATION AND ENFORCEMENT POLICY NO. 7008

			City of Richmond	Policy Manual
Page 1	of 1		Adopted by Council: Dec. 9/91 Amended: Jan. 1	1/93 POLICY 7008
File Ref	: 6450	-00	SIGHTLINE INVESTIGATION AND ENFORCEMENT	
	DOLIO	X 7000		
	PULIC	,1 /008	·	
	It is Co	ouncil po	blicy that:	
	1.	Staff w	ill investigate sightline obstructions as per the following crite	ria:
		a)	Sightline investigations shall be undertaken only upon cit otherwise required during staff's normal course of duty.	tizens' requests or as
		b)	A sightline obstruction shall be considered to exist when restrict motorists' visibility within the triangular area formed back from the theoretical collision point of two approaching of an intersection which is not controlled by a stop sign. (Di	one or more objects I by measuring 16.0 m g vehicles on a corner agram 1)
		c)	A sightline obstruction shall be considered to exist when restrict motorists' visibility within the triangular area former the safe stopping distance from the theoretical collision poir uncontrolled leg of the intersection and a vehicle on a con controlled by a stop sign. (Diagram 2)	one or more objects ed by measuring back nt of the vehicle on the rner of an intersection
	2.	Sightlin	ne enforcement shall be as per the following:	
		a)	Where a sightline obstruction is on private property, the property owner of the violation. If, after a reasonable obstruction has not been remedied to the standard of whichever is less, the matter will be referred to the Department for enforcement of <u>Section 5 of Traffic Bylaw 5</u>	e City will advise the time, (21 days) the the policy or Bylaw Community Bylaws 870.
			If the sightline obstruction is determined to be an urgent a may request the property owner to take immediate action sightline obstruction. If the property owner does not take matter will be referred to the Community Bylaws Departme Section 5 of Traffic Bylaw 5870.	safety matter, the City n to rectify the unsafe immediate action, the ent for enforcement of
		b)	Where a sightline obstruction is on public property, cooperatively with the owner of the fronting property to removed.	the City shall work have the obstruction
	3.	That a of fend to the	II new property development and changes to properties, incl ces and other structures, berms and all new planting of veg Sightline Bylaw. (Diagram 3)	luding the construction getation, shall conform
	(Engir	neering	Department)	
	5012945	/ 6450-00		

Diagram 1



Diagram 2



Page 14

SCHEDULE D to AMENDMENT BYLAW NO. 9539

SCHEDULE M TO BYLAW NO.5870

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CHILD-OF-THE-FRAME	

City of Richmond

Page 1 of 2

FEE: \$_____

TEMPORARY PLACEMENT PERMIT CONTAINER PLACEMENT ON STREET OR BOULEVARD

Applicant:	Permit No.				
Address:	Phone No.				
Owner of Container:	·				
Business Address:	······				
Business Phone:	email:				
Temporary Placement Location:					
· · · · · · · · · · · · · · · · · · ·	·				
Effective Dates:	_to				
Failure to comply with the conditions set out in this permit may result in its immediate cancellation.					
Applicants Signature	Date				
For City	Date				

Supervisor, Parking Enforcement Supervisor, Property Use Inspectors NCO i/c Traffic Section - RCMP

Distribution:

Page 2 of 2

<u>Temporary Placement Permit</u> Container Placement on Street or Boulevard

The owner or operator of a container must abide by all terms and conditions listed below. Failure to do so will immediately render the permit null and void and subject to fine.

The owner or operator of the container must:

- 1. Have a valid City of Richmond Business Licence
- 2. Ensure that General Liability Insurance is in place in the minimum amount of \$5,000,000.00 satisfactory to the City, with the City of Richmond named as additional insured
- 3. That the temporary placement permit is affixed to the container
- 4. That the temporary placement permit clearly shows the street address of placement and effective dates
- 5. The container must be clearly marked with the owners name, business address and phone number
- 6. The container must be sufficiently marked with high visibility reflective material or devices
- 7. The container must be placed with the longest side parallel to the curb
- 8. Must ensure four (4.0) meters of unobstructed road clearance after the container has been placed
- 9. The container must not be placed within six (6.0) meters of an intersecting street
- 10. The container must not be placed within one and one half (1.5) meters of a private road, driveway or sidewalk crossing
- 11. The container must not be placed within six (6.0) meters of a crosswalk, fire hydrant or other traffic control device
- 12. A container may be placed on the street fronting a residence, only if it is determined by the City that there is no practical location on the site for the container.

13. Only one container will be allowed on the street or boulevard per site.

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City of Richmond

Municipal Ticket Information Authorization Bylaw No. 7321, Amendment Bylaw No. 9550

The Council of the City of Richmond enacts as follows:

1. Municipal Ticket Information Authorization Bylaw No. 7321, as amended, is further amended at Schedule B 12A by deleting Schedule B 12A and replacing it with the following:

SCHEDULE B 12A

TRAFFIC BYLAW NO. 5870

Column 1	Column 2	Column 3
Offence	Section	Fine
Failure to drive or operate a Neighbourhood Zero Emission Vehicle in lane closest to right hand curb or shoulder	10.7(b)	\$100
Jaywalking	30.1	\$50.00
Pedestrian crossing a street in a crosswalk in contravention of a traffic control device	30.3	\$50.00
Failure of vehicle to yield to a pedestrian in a crosswalk	30.5	\$150.00

2. This Bylaw is cited as "Municipal Ticket Information Authorization Bylaw No. 7321, Amendment Bylaw 9550".

FIRST READING	 CITY OF RICHMOND
SECOND READING	 APPROVED for content by originating dept. /
THIRD READING	 VW
ADOPTED	 APPROVED for legality by Solicitor

MAYOR

CORPORATE OFFICER





Notice of Bylaw Violation Dispute Adjudication Bylaw No. 8122, Amendment Bylaw No.9554

The Council of the City of Richmond enacts as follows:

- 1. Notice of Bylaw Violation Dispute Adjudication Bylaw No. 8122, as amended, is further amended at Schedule A by adding to, or replacing in, the Traffic Bylaw No. 5870 (1992) section, as applicable, the sections attached to this Bylaw as Schedule A.
- 2. This Bylaw is cited as "Notice of Bylaw Violation Dispute Adjudication Bylaw No. 8122, Amendment Bylaw No. 9554 ".

FIRST READING	 CITY OF RICHMOND
SECOND READING	 APPROVED for content by originating dept.
THIRD READING	
ADOPTED	 for legality by Solicitor

MAYOR

CORPORATE OFFICER

Amendments to Traffic Bylaw No. 5870 (1992) Section of Schedule A of Bylaw No. 8122 Additional Designated Bylaw Contraventions and Corresponding Penalties

A 1 Bylaw	A 2 Description Of Contravention	A 3 Sectio n	A 4 Compli ance Agreem ent Availabl e	A 5 Penalty	A 6 Early Payment Option	A 7 Late Payment Amount	A 8 Compliance Agreement Discount
	Period of time from receipt (inclusive)		n/a	29 – 60 days	1 to 28 days	61 days or more	n/a
Traffic Bylaw No. 5870 (1992)	Container / POD on a roadway or boulevard more than permitted time	9A.2	n/a	\$ 50.00	\$ 35.00	\$ 75.00	n/a
	Container / POD on a roadway or boulevard without permit displayed	9A.3	n/a	\$ 50.00	\$ 35.00	\$ 75.00	n/a
Traffic Bylaw No.5870 (1992)	Parking over 72 hours	12.4 (d)	n/a	\$ 50.00	\$ 35.00	\$ 75.00	n/a
Traffic Bylaw No. 5870 (1992)	Parking in a taxi zone except a taxi	12.4 (V)	n/a	\$ 50.00	\$ 35.00	\$ 75.00	n/a
	Parking of recreational vehicle on a roadway between 8:00 pm to 6:00 am	12.4 (w)	n/a	\$ 50.00	\$ 35.00	\$ 75.00	n/a
	Parking in a tour bus zone, except a tour bus	12.4 (x)	n/a	\$ 50.00	\$ 35.00	\$ 75.00	n/a